UNITED STATES DISTRICT COURT
DISTRICT OF NEW JERSEY
TRENTON DIVISION

NEW JERSEY MANUFACTURERS INSURANCE GROUP A/S/O KECIA ELLIS AND KATHLEEN BRAND,	) Docket No.3:10-cv-01597-AET-LHG
Plaintiff,	) Courtroom No. 4W) Clarkson S. Fisher Building
versus	) & U.S. Courthouse) 402 East State Street
ELECTROLUX, INC.	) Trenton, New Jersey 08608
Defendant.	) April 23, 2013) 11:51 A.M.

TRANSCRIPT OF TRIAL TESTIMONY OF RONALD PARSONS
BEFORE HONORABLE ANNE E. THOMPSON
UNITED STATES DISTRICT JUDGE, and a jury

APPEARANCES:

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TRENTON, NEW JERSEY TUESDAY APRIL 23, 2013, 11:51 A.M.

(As requested, only the testimony of Mr. Parsons is transcribed)

(Jury In)

THE COURT: Call your next witness.

MR. CRAWFORD: Your Honor, we would now call Mr. Ron Parsons to the stand.

THE COURT: Very well. Mr. Ronald Parsons.

MR. KOTT: Your Honor, may Mr. Crawford and I approach off-the-record?

THE COURT: I remember there is something I've got to go over. Well, I can't -- we're going to do it right now. Ladies and gentlemen, I'm sorry, but I've got to take a -- I've got to have another matter that I have to decide, issues that I have to explore. I'm going to ask you to step down at this time

COURTROOM DEPUTY: All rise.

(Jury Out)

THE COURT: Bring the witness forward, let's get him sworn. Here's another question.

COURTROOM DEPUTY: Place your left hand on the Bible, and raise your right hand.

RONALD PARSONS, PLAINTIFF'S WITNESS, SWORN

COURTROOM DEPUTY: Please have a seat. State your name, spell your last name.

THE WITNESS: Ronald Parsons, P-A-R-S-O-N-S.

DIRECT EXAMINATION

BY MR. CRAWFORD:

Q Good morning, Mr. Parsons. Mr. Parsons, could you give us your -- tell us -- the Court what you do.

A I am a fire investigator. I determine origin and causes of fires, and I also perform other analysis on appliances or components that catch fire as it relates to design and safety.

Q Okay.

THE COURT: All right. Now let's get right to the critical areas about which there's a dispute, not the testimony that he's going to give before the jury in general. I don't need to hear that.

MR. CRAWFORD: Okay.

THE COURT: Just where there's a conflict between the two of you.

MR. CRAWFORD: Okay.

THE COURT: Tell me what it is first and then --

MR. CRAWFORD: Yeah, you know, I need the exhibits -- refresh the question, Dave -- Mr. Kott.

MR. KOTT: You need the numbers?

THE COURT: Exhibits or --

MR. CRAWFORD: The exhibit numbers, yes.

(The attorneys engaged in off-the-record colloquy)

MR. CRAWFORD: Judge, if I may.

THE COURT: Mr. Kott, maybe you should tell us. What is it that I need to decide?

MR. KOTT: Yeah, let me -- there's -- there's two things: First of all, Mr. Parsons intends to offer evidence, orally and/or written evidence about testing he did.

THE COURT: Testing he did.

MR. KOTT: Testing he did. That's one category. We don't think that that's properly admissible.

He also, by way of example, wants to talk about expert reports done by experts in other cases. So, for instance, Scott Jones wrote a report in the Smith case in New Hampshire -- I'm just doing these by example -- and that he wants to talk about that expert report.

He also wants to put in, for instance, a document of the CPSC from 2011, which is to only post manufacture, but it's also post sale. It's post fire. And we can go through them, but I just, in responding to the Court's question, there's a few different things that this witness wants to put in that I think are inadmissible.

I also -- the second part was I did want to make a record and discuss further with the Court the PowerPoint, because I have a different view of it than Mr. Crawford articulated earlier.

And I can -- I can --

MR. CRAWFORD: Judge -- I'm sorry.

MR. KOTT: Okay.

MR. CRAWFORD: Judge, if I may, I would just like to ask the questions to the witness to lay a foundation.

THE COURT: Why is the testing he did inadmissible?

MR. KOTT: The reason it's inadmissible, Your Honor, is because under the Third Circuit case --

THE COURT: Maybe the witness should be seated outside while we go through this.

MR. KOTT: Okay.

THE COURT: Mr. Parsons, have a seat outside. Be careful. Don't you fall

MR. CRAWFORD: Good catch.

(Pause)

MR. CRAWFORD: Judge, I'm not sure we saw the new question, just --

MR. KOTT: Did we see it?

MS. MERIN: No.

MR. KOTT: Okay. Shall I continue, Your Honor?

THE COURT: Yes.

MR. KOTT: Just to give the Court a flavor, an example, Mr. Parsons did testing for lint. And the testing that he did was he did ten towels ten times, that is he took ten towels, he did ten loads, then he started again with ten new towels, and did another ten loads with the dryer set up, meaning the venting in a way which he concedes is not the way it was set up in this case, and is not realistic venting at all, meaning how anybody sets it up.

So, -- and I can go on about that testing he did, but Ms. Ellis never said that that's how she used her dryer. By that, I mean ten towels, which is a full load, ten times in a row, then ten new towels.

The significance of the second ten new towels is this expert -- and all the experts -- will testify that when you -- the first time you dry a towel, you're going to get more lint than the seventh time, than the eighth time because it throws off the most lint the first time you dry it. So, when he starts the second ten, he's now at that high lint point.

And, again, equally important, the way it is set up is not either -- and he acknowledges this -- the way Ms. Ellis was set up or the way any installation is set up.

THE COURT: All right. Thank you. Mr. Crawford?

MR. CRAWFORD: Judge, this is a test that this man has done over a long period of time, many different tests. Many, many different tests on this particular style. And it is foundation for him to come to the conclusion that the -- conclusions that he. It doesn't have to be -- there's nothing that says it has to be exactly done the same as the particular dryer to come to a conclusion that this design is defective.

His testing helps to show that the design is defective. And that if you have it set up like Ms. Ellis, or if you had it set up like a normal person, you're still going to get a lint build up.

Furthermore, everything --

THE COURT: Why doesn't the venting make a difference?

MR. CRAWFORD: And he will -- he will tell you that. He's the expert, he will tell you that. Because it only makes a difference, Judge, when the condition brings the water pressure -- pounds of water pressure at the back of the drum above .75. That's the testimony we had earlier with Mr. King.

The manufacturer recommends that the pressure -- the back pressure to make this airflow go the way you want it to go has to be no higher than .75. So, if I run a duct out here and I run it like this -- and he's going to testify about this -- it really has no bearing on the operation of the dryer because it's still -- even with these elbows and even if you run it up through the ceiling vertically, it's still going to be able to conduct itself, the dryer, the way the manufacturer recommends it to do. Because the pressure in the back of that dryer is still going to be .75 or lower, and that's why it really doesn't matter. This is -- this is a red herring, smoke and mirrors defense that they have. Because you're using flex tubing or you're going like this with the flex tubing, you're making it a problem for the dryer.

And it's not the venting that's the problem, Judge, it's the design, and where this lint collects. And that's what

Mr. Parsons is going to tell.

And in addition to that, Mr. Kott has just given what cross-examination is all about. If he --

THE COURT: No, no, no, no, don't give me that argument. I want to know -- you gave the answer.

MR. CRAWFORD: Yeah, I gave it, right. Yes, I did. I think I did. As long a this dryer has the back pressure of .75 water columns with pressure, or lower, then the venting is really not an issue. It's operating the way it should.

THE COURT: All right. Next: Expert reports in other cases. Why do you want to do that?

MR. CRAWFORD: Oh, because experts in the field of design defect always rely on other experts' reports to come to their conclusions. They always use that as a data point to formulate their --

THE COURT: Well, I've been here 34 years, long time, you were probably in utero.

(Laughter)

MR. CRAWFORD: I wish I was like --

THE COURT: And I have not had the experience of having experts use other expert reports as part of their testimony. I have not had that experience.

MR. CRAWFORD: Okay. Well, experts --

THE COURT: I realize that they can use research, books, and generally if they're going to use books, the specific books we have pretrial. I have an exchange as to what books are going to be questioned about. But I don't want expert reports from other trials, other cases used --

MR. CRAWFORD: But --

THE COURT: I mean if he wants to educate himself and learn, fine, that's what he does on his own time. But not to bring into this courtroom expert reports to read from, to talk from. I've never seen that.

MR. CRAWFORD: Well, Judge, I don't -- I don't know that these are reports. These are studies done by other experts. These are -- these are studies that Mr. Parsons will testify are authoritative to give him information and help form a basis. These are not --

THE COURT: Studies?

MR. CRAWFORD: Tests that they did.

THE COURT: Tests that other people did.

MR. CRAWFORD: Yes. That he either observed or was familiar with.

THE COURT: You know, this can -- it's really problematic for a witness to do that because we could go all over the world with tests done somewhere on something. What are these tests done on? What dryers were they done on?

MR. CRAWFORD: It was all on the same model, ball hitch model dryers.

THE COURT: Well, yes, but now I'm learning that this ball hitch dryer covers a universe.

MR. CRAWFORD: Yeah, but -- and that's why I wanted to get Mr. Parsons on the stand and tell Your Honor and explain to Your Honor -- I think maybe a hearing from him would satisfy Your Honor as to how exactly they are in make and airflow. And that's very, very important.

Your Honor is sitting there -- I think, and you correct me if I'm wrong -- I'm not -- you know, I'm at this point in the trial, and I'm not exactly sure if they're substantially similar or not substantially similar. You have all these different models, and they talked about an infinity, or whatever they're talking about.

It's our position that those model changes are so innocuous, they don't change the defect or the production, or the way this dryer works. And that's what this man is going to be able to explain to Your Honor.

THE COURT: I don't believe that.

MR. CRAWFORD: Well --

THE COURT: I mean not from what I've heard thus far.

MR. CRAWFORD: But you haven't heard from our expert. I mean that -- this is our expert who's going to do that, Judge. You talk about traveling around the world, he's traveled around the country studying --

THE COURT: Now why is the Canadian document -- what's that got to do with this?

MR. CRAWFORD: I would have to ask my expert, Judge. I think it -- Mr. King did indicate that they, I think, adhere to the Canadian standards, as well.

THE COURT: Well, they use the Canadian standards. But I didn't hear him say that that's their guide.

MR. CRAWFORD: Well, Mr. Parsons can parse that out. I mean I don't know the extent that he's going to testify.

THE COURT: Well, he's not going to offer a document that -- I'll have to have another -- we'll have another dispute about the -- and I'd rather not have that in front of the jury.

MR. CRAWFORD: And that's why I would -- that's why I would suggest perhaps we put him on the stand now and we can --

THE COURT: How long is he going to be? He's going to be two hours, three hours.

MR. CRAWFORD: He's going to be -- he's going to be long.

THE COURT: I'm not going to run through his whole testimony.

MR. CRAWFORD: Well, I didn't -- I was -- I thought perhaps on these particular items, these items that Mr. Kott has a concern with.

THE COURT: These expert reports in other cases, do you have those documents here?

MR. CRAWFORD: Yeah, they -- they are exhibits that have been given to the other side and I have them, Judge, if you --

THE COURT: Would you? Yes.

MR. CRAWFORD: Okay.

THE COURT: For me.

MR. CRAWFORD: Yes. You know, Judge, we have a series of challenges by Mr. Kott. I don't know which ones are -- that he's challenging in this regard. If you would just tell us which ones they are.

(Pause)

THE COURT: Now what are the exhibits that you're objecting to? The overheads?

MR. KOTT: Okay.

THE COURT: 22, 24, 26, 46?

MR. KOTT: Right.

THE COURT: What are they in general? Describe them.

(Pause)

THE COURT: You know, lunch is at 1 o'clock.

MR. KOTT: I know, Your Honor.

THE COURT: I'm wondering if we can't get started with him on the non-objectionable part, we break at 1, and then -- because I don't want the jury sitting out there now.

MR. CRAWFORD: We can go over his background and --

THE COURT: Yes, why don't we do that?

MR. CRAWFORD: Okay.

THE COURT: 1 o'clock we break for lunch.

MR. CRAWFORD: Okay.

MR. KOTT: Can I just be heard on this 306-page PowerPoint, Your Honor? Unless Mr. Crawford is not going to use it --

THE COURT: He's not going to use that before lunch, I don't think.

MR. CRAWFORD: Not before lunch.

MR. KOTT: Okay.

MR. CRAWFORD: May I get the witness, Your Honor?

THE COURT: I do think that Mr. Crawford -- if he wants to do the testing, have the witness testify about his testing, and if Mr. Crawford is -- somehow his theory is the defect has nothing to do with the venting, then I think he can put this in through his expert, and Mr. Kott can cross-examine on it.

MR. CRAWFORD: Have him on the stand, Judge?

THE COURT: Yes. Bring -- we're going to bring the jury in. Are you ready to bring the jury in? Fine. What?

MR. CRAWFORD: Can I instruct the witness on what we've --

THE COURT: Yes, sure, tell him.

(Pause)

THE COURT: Bring the jury in.

COURTROOM DEPUTY: All rise.

(Jury In)

THE COURT: All right. Ladies and gentlemen, please be seated. And we're ready to proceed. Maybe we should swear him in again in front of the jury.

COURTROOM DEPUTY: Let hand on the Bible, raise your right hand.

RONALD PARSONS, PLAINTIFF'S WITNESS, SWORN

COURTROOM DEPUTY: Please state your full name.

THE WITNESS: Ronald Parsons, P-A-R-S-O-N-S.

THE COURT: All right. Mr. Crawford.

MR. CRAWFORD: Thank you, Your Honor.

DIRECT EXAMINATION

BY MR. CRAWFORD:

Q Mr. Parsons, what is it that you do?

A I am a fire investigator, and I determine origin and cause of fires. I also do design and safety analysis of products or devices that catch on fire.

Q Who do you currently work for?

A I currently work for a company by the name of Wright Group.

Q Do you have a background as a fire analyst?

A Yes, sir.

Q And what is that background?

A I have 35 years of origin and cause analysis through the Wright Group and my previous employment.

Q Are you NAFI trained?

A I am NAFI, which is the National Association of Fire Investigators. I am certified as a fire investigator. Additionally, I'm certified as a fire investigation instructor.
Q What is IAAI trained?
A That is the International Association of Arson Investigators. I train regularly and take classes and courses through NAFI and IAAI in order to keep my five-year certification current. I'm required to have a minimum amount of continuing education hours in the field to stay certified.
Q Do you have certifications in that field?
A I do.
Q What are they?
A My certifications are as a fire origin and cause investigator and as a fire origin and cause instructor to teach others how to investigate a fire.
Q And how about ASI Masters -- ASE Masters, what's that?
A ASE is automotive service excellence. I currently have a masters certification in ASE. And ASE currently has 47 levels of certification. Again, five-year certification. I retrain six days a year for continuing education to keep my certifications current. I use ASE for design analysis, electrical analysis, heat transfer analysis, thermodynamics, airflow, all of the components of an automobile are all -- it covers all the gamuts of engineering.
Q Okay. How about -- could you give us a feel for -- you

know you're here for the Ellis case, is that right?

A Yes, sir.

Q Okay. Could you give us some training course and seminars that would be beneficial that you've taken that would apply in this matter?

A Yes, there was some specific seminars that I have taken on appliance fires, and also in the more recent years have taught as it relates to dryer fires and appliance related fires.

Q And what are those?

A May I --

Q Some of those.

A May I please refer to my CV?

Q Oh, yeah, sure.

MR. CRAWFORD: In fact, that's -- just for the record, Your Honor, the plaintiff's Exhibit 1 is his report and CV.

BY MR. CRAWFORD:

Q And just let me know when you have your CV there.

A Yes.

Q Okay. You were going to tell us about some of the seminars and training courses that would be applicable in this matter that you've --

A Correct. Generally all of my seminars have to do with origin and cause or advanced origin and cause. There are specific seminars that deal strictly with appliance fires.

Q Okay. Have you given presentations on these topics?
A Yes, I now regularly teach on appliance fires and have a specialty in ball hitch and bulkhead dryer fires.
Q And what are some of the presentations you've given?
A In 2011, I gave a presentation to the ATF for advanced origin and cause.
In 2011, I trained the staff fire investigators for Liberty Mutual.
In 2010, I trained at the PLRB Conference in Louisiana on origin and cause.
Q What's PLRB?
A Property Loss Register Bureau.
Q Okay.
A I believe that's correct. In 2010, I also taught a group of claims personnel from Liberty Mutual on advanced origin and cause.
2009, I also taught the original fire staff for Liberty Mutual on advanced origin and cause.
This list goes on for --
Q Yeah. Just -- did you give any presentations to IAAI? I know you have several there, but could you pick the one that you may have given that's most applicable to this case?
A I think the first one was the New York Chapter of IAAI, which was in November of 2004, which was an appliance fire training, specifically dryers.

Q Okay.
A And there was another course that I had given at the Cape four or five years ago for IAAI where we discussed origin and cause and design of dryers and physically built a laundry room and showed the class how dryer fires occur, how the fire can propagate from within the appliance, spread out of the appliance, and catch the structure on fire.
Q Okay. What are your responsibilities at the Wright Group?
A My responsibilities are to complete assignments for origin and cause analysis. Also I'm in charge of the engineering staff. We have a crew of engineers who report directly to me, as well as the lab technicians. So, on top of manager responsibilities, I also get to carry a full book of business meeting. I complete origin and cause analysis investigations, if not daily, I'm working on them daily.
Q Do you have a lab at the Wright Group?
A Yes, sir.
Q Can you describe it for us, and what kind of things do you do for it?
A The lab -- the current lab that we have onsite is approximately 8,000 square feet. It has a burn hood so that we are capable of burning components up to 500 kilowatts. So, half a megawatt, which is a substantial amount of energy.
The facility houses numerous rack storage where we keep our exemplar appliances, such as dryers or any other

appliances that we're looking at. We have an electronics exam room if we need to look at electrical components, either through microscopic analysis or other type of analysis. We have a clean room that's dedicated specifically to that.

We have an electrical lab which we do electrical testing with dedicated service panels and circuit protection devices just for unique testing. The high bays are geared for full inspections, generally fire inspections are very dirty. So, we have a facility where we can take everything apart, make a mess, we'll learn what we need to do, and then not contaminate the primary facility.

Q Okay. Could you give us a little background on your safety engineering experience?

A Yes. My safety engineering experience started back in late -- the late '90's, '99 and 2000. As part of my ongoing training, I needed to understand more about the safety hierarchy and how that hierarchy would apply to the design analysis that we are doing.

Mr. Jones, Scott Jones, an ex-engineer from GE in their laundry division actually schooled and taught us in the safety engineering principles which is a relatively simple principle. And that principle simply is once you recognize a hazard as a design person, you need to design the hazard out of the system. If you cannot design the hazard out of the system, you need to install an engineering guard or a safety. And lastly, if you can't install an engineering guard or safety, you must warn or give an instruction.

As an example, a table saw blade now has a guard over it, that's an example of a guard.

A stove with an open gas flame, if I guard it, you lose the utility of the product, so that's where a warning would come into play.

Additionally, we have brought other engineers and other safety engineers into our facility to educate, teach, and just reinforce the safety engineering principles and disciplines. We practice safety engineering in our analysis since the late '90's and use it -- used it regularly for the last 13 years.

Q Are you a humans factors expert?

A I am not a humans factors expert.

Q And does humans factors involve safety -- what's the distinction? When you say you're not, what distinction are you making when you're -- you're involved in safety engineering, but yet you're not a humans factor. What's that distinction that you're making?

A Yes, a -- a humans factors person is a person who would follow the ANSI Z535 standard that you were talking about earlier with Mr. King.

Q Yes.

A That is the standard that sets the guidelines on how to design a warning. I am not the person to tell you what the warning should say, what color it should be, what the font should be, where it should be placed on the appliance, or how the customer would interact with that.

I am an expert as it relates to safety engineering and the safety hierarchy and how the warnings come into play in that hierarchy.

As an example, a warning is least preferable to a redesign of the product. A warning is least preferable to installation of a guard or a safety.

Q Could you give us your experience as a -- in the appointment as a fire investigator?

A My experience started in 1979. I was employed by a company by the name of Eastern Investigation. I was right out of school and started this career path. And, unfortunately, any of the schooling that I had didn't help me whatsoever to be a fire investigator. So, ultimately, I needed to learn this from the ground up. And how I started was I was hired on as a trainee. I dug fire scenes, I worked in their lab. I worked my way through the process. I went to schooling, seminars, training that was offered by the company, as well as by outside parties. And my training and experience comes from all of my experience in my employment.

In 2000 and -- excuse me -- in 1984, I left that firm and was offered a job position at the Wright Group, the company

I'm at now. That firm had a lot more opportunity for someone like me. A much better lab, a much better engineering staff. So, I could learn a lot more and I could evolutionize as a fire origin and cause investigator.

Q Okay. You talked a little bit about appliance in general, what's your experience investigating dryer fires?

A Dryer fires and appliance fires, I've always had experience with them very general, up until 1999. I 1999, our lab had approximately 85 or 100 dryer fires. And I was concerned that we were collecting this kind of information and we weren't able to --

THE COURT: Well, I don't think that's really the question.

MR. CRAWFORD: Yeah.

BY MR. CRAWFORD:

Q What's your experience in investigating dryer fires?

THE COURT: In other words --

Q How --

THE COURT: -- how much have you done?

MR. CRAWFORD: Right.

THE COURT: When?

THE WITNESS: Gotcha covered. Sorry, ma'am.

THE COURT: That's all right.

A I have been actively investigating dryer fires since 1999. Approximately 20 hours a week is spent specifically on dryer fires, and probably the last six or eight months of this year it's probably 30 or 35 hours just examining dryers, testing dryers, and completing dryer fire origin and cause design and safety analysis.

Q How many of these dryer fires would you say you've investigated?

A Well over 1,000 dryer fires. And it may be approaching 1,500 now. Our backlog currently in our facility is 200 dryers that we haven't looked at, and we have 300 additional due to come in, that pushes up to 2,000 dryers.

Q Does your investigation -- has your experience investigating dryers involved ball and hitch dryers?

A Our investigation, yes, includes ball hitch style and bulkhead. There's really only two types of dryers that are produced in the U.S., two different designs of dryers.

Q And what's your breakdown on the percentages of your investigation between those two?

A Our investigation -- I would say approximately 80 percent, and it might be as high as 90 is ball hitch style appliances, meaning dryers. And ten, and maybe as high as 20, but more -- probably conservatively on the ten percent side is the bulkhead style dryers.

Q And your investigation involved -- of these dryers involves all brands?

A Yes. Whatever brand is sent to our office, whether it's a

Maytag, Whirlpool, Kenmore, LG, Samsung, Electrolux, Frigidaire, there are numerous brands. But, again, it's important to delineate, there are only two designs of dryers.
Q Is there a distinction between a non-destructive test or exam and a destructive test and exam?
A Yes, sir.
Q Okay. Could you tell me how many destructive testings you've been involved in, and what that difference is between the non-destructive and destructive?
A All of our destructive exams are predicated -- precursored with a non-destructive exam. The reason why we complete non-destructive exams --
THE COURT: Explain first, what is a destructive exam and what is a non-destructive exam.
THE WITNESS: Yes, ma'am. A non-destructive exam is exactly that. Looking at the appliance and not disassembling it to change any of the evidence.
A destructive exam in our facility is complete disassembly of the dryer and all its components. So, literally, almost every nut and bolt is removed and the entire dryer is scattered across our laboratory benches so that we can evaluate each and every component.
BY MR. CRAWFORD:
Q Okay. The second part of that question: How many destructive exams have you been involved with concerning

dryers?
A I'm going to say we're approaching 1,000, sir.
Q Do you have experience with dryer design analysis?
A Yes, sir.
Q How so?
A In analyzing all of the dryers, we have to understand -- I have to understand how the design works. We purchased exemplars, we have owners' manuals, we have service manuals. We've tested dryers. We have invoked specific failure modes such as restricted venting, large loads, not cleaning the lint filter. We've done all of these events so we can evaluate how the dryer design will perform when subjected to whether it's normal use or abnormal use.
Q Well, do you do comparative analysis?
A We always do comparative analysis between the bulkhead dryer and the ball hitch dryer. Meaning if I've tested a ball hitch dryer for lint collection, I've tested a bulkhead dryer under the exact same parameters for lint collection.
Q Do -- does those dryer design analysis get into design alternatives?
A Yes. We always look at design alternatives using the safety hierarchy. Meaning if we find an event within an appliance that we feel is a hazard, such as a fire, we always look to the hierarchy to understand how to eliminate that hazard. Whether it's redesigning the appliance, whether it's

installing an engineering guard or safety, or lastly, and least preferably, giving a written instruction or a warning.

Q Have you gotten involved in analyzing and designing the guards and safeties yourself?

A Yes. We have actually built several test dryers. And they're actually called the RONCO series, it's truly a long story. But we have currently right now four RONCO series in production. And what these RONCO series are is they are four ball hitch dryers, two are gas and two are electric. And the issue that we have as far as a hazard is isolation of the lint from the heat source. So, we have built and designed four appliances utilizing simple guards to isolate lint from fuel.

If I isolate the lint or lint from the heat source, excuse me. If I isolate the lint from the heat source, I cannot have a fire.

So, the purpose of our redesign and our design analysis was to evaluate:

A, if we could design a guard;

B, once we did design the guard, it needed to go through what we call our energy comparison and our performance analysis. It had to dry, it had to use the same energy as the unit that we outfitted, and it had to have the same performance characteristics. Meaning if 14 pounds of wet towels took an hour and ten minutes to dry in a conventional unmodified dryer, it needed to dry in the exact same time in the modified dryer.

Q Does your job involve -- and the history of your experience involve reviewing reports and depositions of other experts?

A Yes. As part of this process, we review depositions. We review reports of others, testing of others. It's all about learning new information and applying that information to our opinions.

So, in a lot of these cases, we have depositions from experts on the other side or on the same side that we'll read and review. If they come up with a test procedure or a protocol, we will visit that in our lab and see if it's worth reduplicating that event.

We read numerous expert reports, both for and against us so that we understand exactly where they're coming from to make sure that when we look at our analysis, that we've considered the entire sphere of information that is available to us.

Q You used the term "protocol." What is that in your field, and why is it important?

A Protocols are a set of standards -- or guidelines is probably a better word. All of our testing, we invoke what's called a protocol, and we write that protocol down. The reason why is is if we do a test, whether it's a flame impingement test, whether it's an airflow test, a lint test, I want to be able to reduplicate that exactly the same way every time.

So, we have a written protocol, and generally we photo document the whole entire process so another engineering firm, another O and C person, anybody else could take our documentation and know exactly what we did, how we did it, and they could reproduce that testing exactly the way we did, and they could obtain whatever their results are.

Q Have you generated reports as experts in other matters?

A Yes, sir.

Q Have you been qualified as an expert and challenged -- and have been challenged in court as an expert?

MR. KOTT: Objection; relevance what some other court did on some other record is not this record in this case.

THE COURT: Really -- and I don't even think there's going to be an objection here with regard to his serving as an expert here. Is there?

MR. KOTT: Well, it depends what he's offered on, Your Honor. I --

THE COURT: Okay.

MR. KOTT: I can --

THE COURT: Okay.

MR. KOTT: I mean some yes and some no.

THE COURT: I understand.

MR. CRAWFORD: And that's -- and that's what --

THE COURT: But that really is not a grounds one way or the other, whether other court -- what other courts have done. It's a -- it's really of no relevance. But I don't think there's going to be a problem here.

MR. CRAWFORD: Okay.

THE COURT: So, let's move on.

MR. CRAWFORD: Okay. Thank you.

BY MR. CRAWFORD:

Q Are you experienced with the NFPA 9 -- NFPA 9 -- let's start with 921, we'll get more specific. NFPA 921, what is that, and are you -- and how does that work?

A NFPA 921 is a guide to fire investigation or for fire investigation. Even though the term or the -- even though the name of it says it's a guide, it is not a guide. It is a standard. Every single edition of NFPA 921 has been sent to ANSI, the American National Standard Institute, for approval. Every single 921 guide -- typically it's updated every three years -- is approved as a standard by ANSI.

The 921 guide sets the parameters for how we complete fire investigation, how we determine the responsibility for who's responsible for the fire. It's a very comprehensive document. If I had to come away from 921 with one thing, it sets down the scientific method. We must use the scientific method in determining our origin and cause analysis, our design analysis, and all of our opinions must meet the scrutiny of the scientific method.

Q And that methodology, what is that?

A The methodology is first is to define the problem that you need to study. Once you've defined the problem, you need to collect data. Once you've collected data -- and that data could be onsite analysis, it could be examination of artifacts harvested from the loss site, it could be white papers, it could be standards, it could be testing in the lab, it is whatever information that's available to the investigator. Once you've collected that evidence or that data, you must analyze the data. Once the data is analyzed, we form opinions.

Now these opinions are required by the scientific method to be tested. And once they're tested through the scientific method, whether it's cognitive analysis, but specifically physical testing, if we form an opinion and we test it, and we find that the opinion is not supported, then we reject that opinion, and we go back through the cycle, recollect data, re-analyze the data and form another opinion. We work that process until we come up with one opinion which is supported by all of the data, and meets the scrutiny of the testing parameter of the scientific method.

Q Does the NFPA 921 require the experts to give their opinion within a reasonable degree of scientific certainty?

A Yes, sir, that is mandatory.

Q And did you do that in the Ellis matter --

A Yes.

Q -- your opinion?

A Yes, sir, I do that in every case.
Q Okay.

MR. CRAWFORD: And, Your Honor, at this time, the plaintiff would move to have Mr. Parsons admitted as an expert in product failure analysis with a --

THE COURT: In what?

MR. CRAWFORD: Product failure analysis with a specialty in dryer design and safety, including origin and cause.

THE COURT: All right. Mr. Kott, what is your position with regard to the offer of the witness? Do you want to question?

MR. KOTT: My position on the offer of the witness is I do not contest his qualifications on cause.

As to origin -- well, it’s not a qualifications issue, it’s a cumulative issue because Mr. McGinley testified yesterday as to origin, so that would be cumulative.

THE COURT: But -- all right. So --

MR. KOTT: As to the balance, I would like to examine the witness.

THE COURT: Very well. When you say “product failure analysis,” Mr. Crawford, are you talking about just across the board? Are we talking about dryers?

MR. CRAWFORD: Well --

THE COURT: What are we talking about?

MR. CRAWFORD: He has the expertise across the board, but that's why I said with a specialty in dryers. There may be some element of product failure analysis that overlaps with the dryers to -- and that's why I made it general. But it's really with a specialty in dryers. Product failure analysis with regard to dryers as a specialty.

THE COURT: All right. Product failure analysis with regard --

MR. CRAWFORD: With a specialty in dryer design and safety, including origin and cause.

And, Judge, just on the issue -- and I did not --

THE COURT: And not just fires in dryers?

MR. CRAWFORD: That's correct. That's correct.

THE COURT: All right. Mr. Kott, if you wish to voir dire, you may.

VOIR DIRE

BY MR. KOTT:

Q Mr. Parsons, I want to talk about your education. After graduating from high school, you spent two years at Fitchburg State College, is that correct?

A That is correct.

Q And that was, in fact, a two-year college, is that correct?

A No, that was a four-year college with a two-year program, sir.

Q Okay. So, you did the two-year program?
A I did, sir.
Q And you completed the two years?
A I did.
Q At Fitchburg State, you studied industrial arts, which is the study of metal and woodworking, is that correct?
A That is correct, yes.
Q You were learning to be a shop teacher, is that correct?
A That is exactly correct, sir.
Q When you left Fitchburg State, you did auto repair work, is that correct?
A I worked as a technician for about a year or so, and I put myself through school as --
Q Just -- I’m sorry. I don’t mean to interrupt.
THE COURT: No, just answer the question, and then Mr. Crawford can come back and ask any additional questions.
BY MR. KOTT:
Q So, I asked when you left Fitchburg State, you did auto work, is that true?
A For one year approximately.
Q Okay. You’re not an engineer, are you?
A No, I am not, sir.
Q You do not have an engineering degree, is that correct?
A No, I do not.
Q In fact, you’ve never taken any engineering courses, is

that correct?
A I've taken engineering courses, but not at the collegiate level.
Q Okay. So, you have no education -- I'm sorry -- engineering courses at the college level, is that correct?
A That is correct. Most of my engineering studies --
Q Just stay with me, sir. You have no college study in safety engineering, is that correct?
A That's correct.
Q You have not had any formal education in safety engineering, is that correct?
A Not at the collegiate level, that's correct.
Q You have no college courses in product design, is that correct?
A No, sir.
Q You have no formal classroom training in any level in the area of design, is that true?
A There is no college available for dryer design. So, no, I do not have --
Q Did you say dryer design?
A Yes.
Q Yes. Okay. I wasn't clear. My fault. You have no formal classroom training at any level in the area of design, is that correct?
A Not at the collegiate level, correct, yes.

Q You've never taken any college physics courses, is that correct?
A Correct.
Q Never taken any college chemistry courses, is that correct?
A That's correct.
Q You're not a licensed professional engineer, is that correct?
A I am not a PE.
Q And you're not a PE in any state in the union, is that correct?
A That is entirely correct.
Q In fact, you're not even eligible to take the PE exam in either Massachusetts or in New Jersey, isn't that true?
A No, I'm actually eligible in Massachusetts; I've worked 20 years under another engineer. That allows me to take that exam as long as I take their pre-courser (sic) -- cursers -- courses -- excuse me. Then I would be eligible to take that exam.
Q But you haven't taken those courses, is that correct?
A I have not, sir.
Q So, you're not eligible to sit for the exam in the Commonwealth of Massachusetts, is that true or is that false?
A That is true, yes.
Q Thank you. You've never worked for an appliance manufacturer.

A No, sir.
Q You've never been hired by a manufacturer of dishwashers, clothes dryers, clothes washers, or refrigerators to consult on the design of their products, is that true?
A I believe so, yes.
Q Oh, by the way, did you review your deposition in preparation for your testimony today?
A I did not.
Q Okay. When's the last time you looked at your deposition?
A When the errata sheets were done, so a couple of years ago.
Q All right. And when I say your deposition, it was actually three days of depositions because it involved a few different cases. Just for efficiency, we did it at the same time, correct?
A Correct, but generally I say the same thing the same way all the time.
Q You never worked for a company that designed dryers, is that correct?
A That is correct.
Q You've never actually designed a dryer that was commercially sold, is that correct?
A Correct.
Q You never designed a dryer that actually went into production -- into mass production, is that correct?

A That's correct.
Q You've never designed any kitchen appliance that went into mass production or was commercially sold, is that correct?
A That is correct.
Q You never designed any product for commercial use, is that correct?
A That is correct.
Q You have no manufacturing experience, is that true?
A You mean working for a manufacturer?
Q Do you have any manufacturing experience?
A I have worked for manufacturers and evaluated their designs on other components.
Q Okay. But as far as you being an employee by a manufacturer like Mr. King works for Electrolux, you've never been employed by a manufacturer, is that correct?
A That is correct.
Q You've never published any articles in peer review journals, is that true?
A That's correct.
Q You've never published any articles on the work you've done with dryers, is that correct?
A That's correct.
Q And you've never testified at trial before a jury like we're doing here in any dryer lint fire cases --
A Not --

Q -- is that true?
A Not on dryers.
Q On your other dryer cases, in fact, the insurance company you worked for, it hired Scott Jones to be the expert on design, on some of those cases, isn't that correct?
MR. CRAWFORD: Objection, Your Honor.
THE COURT: Yes, that's irrelevant.
MR. KOTT: Okay.
BY MR. KOTT:
Q Have you done other cases where on your side, there have been design engineers?
A Yes, Scott Jones and I regularly work together. He is an ex-GE engineer who worked in their laundry department. He's the individual who reviewed our RONCO design.
Q Right. And he's a licensed professional engineer in eight states or so?
A He is in a number of states, sir, yes.
Q Okay. You talked -- in response to one of Mr. Crawford's questions, you talked about 80 percent or 90 percent of the dryers you see are ball hitch, and the other are bulkhead, do you remember that?
A Yes, sir.
Q But what you see at your company is what the insurance companies send you, as far as dryer fires, to look at, correct?
A Yes, that is true.

Q And you've -- and it's been widely known among the insurance companies your opinions that these bulkhead dryers are defective, correct?

MR. CRAWFORD: Objection, Your Honor; speculative of other companies.

MR. KOTT: Okay.

THE COURT: Yes, I'll sustain the objection.

BY MR. KOTT:

Q Well, you work for a number of different insurance companies on these dryer fires, correct?

A Yes.

Q And you've written reports for them where you've criticized the bulkhead design, is that correct?

A No, I've never criticized the bulkhead design. I've criticized the ball hitch as --

Q I'm sorry.

A -- being a defective design.

Q I'm with you. So, if you did a case for State Farm five years ago, you'd write a report that said the ball hitch design is defective, correct?

A Correct.

Q And, therefore, State Farm would know if it had another dryer fire, they'd know that you had that opinion because you had already rendered it, correct?

A That, and we have the most experience in testing and

analysis.
Q Stay with me. State Farm, in my example, would know that, correct?
A They would.
Q As would Travelers, and all the other insurance companies you do these cases for, is that correct?
A That is correct.
Q Now, in fact, other labs that look at dryer fires have a different percentage, isn’t that true?
A Yes.
THE COURT: Percentage?
MR. KOTT: Percentage of bulkhead versus ball hitch.
THE COURT: All right. You can answer that question.
A Correct. We compared our analysis --
Q Just stay with me. My first question was others --
MR. CRAWFORD: Objection, Your Honor.
THE COURT: You can get to that.
MR. CRAWFORD: Yeah, I would like to -- I would think he would be able to answer the question.
THE COURT: Yes, he can answer.
MR. CRAWFORD: Yes.
THE COURT: But he can answer the question that he was asked.
MR. KOTT: Right.
THE COURT: And then you can come back, if you wish.

MR. CRAWFORD: Sure.
THE COURT: All right.
MR. KOTT: Could I ask the court reporter to repeat the question I asked?
THE COURT: No. You -- you --
MR. KOTT: I can't --
THE COURT: You --
MR. KOTT: I can't --
THE COURT: You search.
MR. KOTT: All right.
THE COURT: I bet you can repeat that question.
MR. KOTT: All right.
BY MR. KOTT:
Q Other labs have a different percentage, ball hitch versus bulkhead, is that true?
A Some are similar to ours, others are different than ours.
Q Right. Let's talk about the Travelers. They have a large lab, is that correct?
A Yes, sir.
Q Travelers is a major homeowners' insurance carrier, is that correct?
A Yes, that is true.
Q They see a lot of dryer fires, correct?
A Yes.
Q And, in fact, at the Travelers -- at the Travelers' lab,

they retrieve all the dryers to bring back to the lab, right?
A 100 percent across the board --
Q Right.
A -- for any dryer fire, it's brought to Travelers' lab --
Q And they --
A -- that's correct.
Q And they at the Travelers, their numbers are about 60 percent ball hitch and about 40 percent bulkhead, is that true?
A I think the number is more like currently, 60 percent ball hitch Electrolux. There are some GE ball hitches in there, which I believe are approximately ten percent. The balance is others, whether it's bulkhead or there are some condensing dryers. They're very slim in the marketplace, but there are some, quote/unquote, "others."
Q Did you testify in deposition in the Power deposition in April, 2012 that about -- at the Travelers' lab, about 68 percent were ball hitch? Do you recollect giving that testimony?
A That would be about right. I just said 60 percent ball hitch Electrolux and ten percent ball hitch --
Q Right.
A -- so, yes, it's about --
Q Okay.
A -- 70 percent.
Q Okay.

MR. KOTT: I -- I don't know where the Court wants me to speak to the Court about the qualifications issue, meaning here or at the sidebar?

THE COURT: Sidebar.

(Sidebar conference commences at 12:49 P.M./Concludes 12:53 P.M., transcribed under separate cover.)

THE COURT: All right. I'm going to -- the jury will step down. We'll have lunch until 2:15. Thank you very much. You may step down. 2:15, be ready to resume.

(Jury Out)

THE COURT: The witness may step down. Maybe I'm misreading something, but that's how I see it. What other witnesses do you have?

MR. CRAWFORD: No one else on liability. I have a damages expert, if you want to call fact witness, but nothing on liability. And -- this is -- I mean this is -- he's trying to represent it, I would submit, as a Daubert motion. But Judge Goodman said file -- furthermore, Judge, I believe that his experience unto itself qualifies him --

THE COURT: He can talk about how dryers work. But for him to be qualified to talk about the defect in the design, that is the heart of the case.

MR. CRAWFORD: Right.

THE COURT: And that's a Daubert motion, as I understand it. I don't know what --

MR. CRAWFORD: I don't disagree. His report's been out there -- and, Judge, I know you have -- I know you have -- I know you say it may not have a bearing on this, but I do think it does in that this -- in the Third Circuit, the Philadelphia District Court, I presented -- the case settled before it went to trial, but I presented Mr. Parsons, and the judge over there had a Daubert hearing or filing and made a decision that he was qualified for everything that he was offered in his report. And those -- the parameters of that report are the same that are in this report.

THE COURT: Well, I -- you know, I don't know what that case is about and --

MR. CRAWFORD: It's the same thing, Judge.

THE COURT: -- I can't study it.

MR. CRAWFORD: I know.

THE COURT: And I don't know who that judge was -- who was that?

MR. CRAWFORD: This was Judge Baylson. And -- and the presiding judge over in the Middle District of Pennsylvania, Yvette Kane, upheld everything on a Daubert motion.

THE COURT: Yes, but what was he being offered for?

MR. CRAWFORD: Same thing in these two cases. The same thing.

THE COURT: As a what?

MR. CRAWFORD: As an expert in design, as an expert in safety engineering, as an expert in safety engineering, as an expert on cause and origin. The same things that are being offered here.

THE COURT: And what did Judge Baylson do?

MR. CRAWFORD: He allowed -- he said he's qualified for everything. And then the case settled shortly after that.

And Yvette Kane, who's the presiding judge in the Middle District of Pennsylvania, had a hearing --

THE COURT: Well, look, here's the -- I'm -- I'm forced to make a quick decision in this because it was not styled as a Daubert motion and I didn't view it as such and, therefore -- because if I had, I would have set aside a day -- not today in the middle of a trial -- to review that. You let me see Judge Fisher's case; we'll look at it.

But I'm inclined to say, fine, you challenge his qualifications, you can do that. You're conceding with regard to his qualifications on origin of the fire. And the jury can decide whether the witness is sufficiently qualified.

MR. CRAWFORD: Thank you, Your Honor.

THE COURT: Let me see Judge Fisher's case, and I'm going to lunch because I have a judges' meeting at 1 o'clock.

MR. CRAWFORD: Do you want Judge Kane's opinion?

THE COURT: No.

MR. CRAWFORD: Okay.

THE COURT: If you had one from Judge Baylson, yes. Judge Kane, no.

MR. KOTT: Should I -- should we give the case to Your Honor's law clerk?

THE COURT: Yes, that will be fine

MR. KOTT: And we're due back when, Your Honor?

THE COURT: You're back at -- due back at 2 o'clock, or five after.

(Recess 12:57 P.M./Reconvene 2:04 P.M.)

THE COURT: And I'm not happy to see it at this juncture. Mr. Kott, I have your brief -- I don't know when this was filed -- objecting to the admissibility of the opinions of plaintiff's liability expert. When was that filed?

MR. KOTT: If it's -- if it's a supplemental trial brief --

THE COURT: Yes.

MR. KOTT: Yeah, it was filed on April 9th, 2013.

THE COURT: Well, I'm afraid that's just too late because, in effect, this, as I see it, is a Daubert challenge arguing that the gatekeeping responsibility of the judge would require an evaluation or the adequacy -- and the qualifications of the expert to render an opinion, and that -- in this design defect case. That would be the core of the case.

I looked at -- and I just think that Daubert motion should have been brought earlier. I see the plaintiff responded. I see plaintiff's position. Clarkson Fisher's Appellate Division opinion really, as I see it, is pertinent to this insurance producer specialty. And plaintiff's expert was not qualified due to the lack of license under the New Jersey Insurance Procedure Licensing Act because that Act mandates that one who claims to be an insurance expert obtain license. So, I don't -- as a prerequisite. So, I don't really think that that is determinative in this case.

I think it's problematic here, but at this point, my rather practical solution is to say: Look as an origin and cause of fire expert, he's qualified. With regard to design, product failing, I really think that's broad and I really think you should try your best to just limit it to just the dryer.

But I would say that Mr. Parsons' qualifications, obviously as an engineer, are lacking.

It may be that if this had been flagged for me earlier, I would have ruled that he could not testify with regard to design defect. But I think at this juncture, I'm going to let him testify, but with a clear understanding to the jury that his qualifications are challenged, and it will be up to them to decide whether he's sufficiently learned and expert in the field to be able to opine credibly. And that's part of the charge anyway on expert witnesses.

So, that's where we're going to go, and we'll move along in that light.

All right. Bring in the jury.

MR. CRAWFORD: Your Honor?

THE COURT: Yes?

MR. CRAWFORD: We have slide from our exhibits.

THE COURT: Yes.

MR. CRAWFORD: And, again, it's about the third or fourth time, it's not working. I was wondering if we could get an IT person up here to make this work.

THE COURT: Sure, we'll call that person. In the meantime, you'll just have to go along with it and use your photographs or hold things up or pass them through the jury box.

MR. CRAWFORD: Very well, Your Honor.

(The Court engaged in off-the-record colloquy with staff)

MR. KOTT: And, Your Honor, I would ask of Mr. Crawford that before he or the witness publishes anything to the jury, that --

THE COURT: Yes, show it to -- you should do that anyway.

MR. CRAWFORD: Okay.

THE COURT: Show it to Mr. Kott.

(Attorneys engaged in off-the-record)

THE COURT: All right. Do you have the jury? All right. You just talk to each other. Come on, bring the jury in.

COURTROOM DEPUTY: All rise.

(Jury In)

THE COURT: All right. Have a seat, Mr. Parsons. You're back on the stand. Ladies and gentlemen, please be seated. We're ready to proceed.

Mr. Crawford, you may proceed.

MR. CRAWFORD: Thank you, Your Honor.

THE COURT: Now we had a review of the qualifications of the witness who is being offered by the plaintiff as an expert. And there's agreement that he's qualified to testify as a cause and origin of the fire expert. That he has the qualifications to so testify.

There is a question with regard to -- or it's challenged as to his qualifications on product failure and so on. You heard that, you were here. And so I can simply say to you he's been called by the plaintiff to testify. He will be permitted to testify, and it will be up to the jury to decide how you evaluate that testimony, how you comprehend and are persuaded by that testimony. It's up to you. You're going to hear more witnesses before this case is over, you're going to have to evaluate the credibility, believability, knowledge, of all the witnesses, other than the fact witnesses, of course. But I mean all of the opinion witnesses, you're going to have to evaluate and decide whether you are persuaded by the opinions which have been offered.

All right. And obviously you're going to consider their qualifications as part of what you would consider when you listen to an opinion by a witness who has been called by a party as an expert. You're listening to what's the training, the background, the experience, the expertise of that person. And you weigh that as part of your evaluation of that person's testimony.

All right. It looks as if we're having some problems with electronics. For people from my generation, we didn't have electronics, we just passed photographs around. We may be back to that here.

MR. CRAWFORD: Your Honor, in order for the IT personnel to get this working, they may need Mr. Parsons to address his computer, is that -- is that --

THE COURT: To address that computer? Well, you tell us what we're supposed to do and we'll see whether we can accommodate you.

(Unrelated off-the-record colloquy regarding electronics malfunction)

RONALD PARSONS, PLAINTIFF'S WITNESS, RESUMES STAND

DIRECT EXAMINATION CONTINUED

BY MR. CRAWFORD:

Q Mr. Parsons, just to lay a foundation for what's going on there, you --

THE COURT: Is that microphone on?

MS. KALBACH: It is.

MR. CRAWFORD: Can you hear me now?

THE COURT: I can hear you, but it's not on.

MR. CRAWFORD: Hello?

MS. KALBACH: Now it's on.

MR. CRAWFORD: How's that? Is that better?

THE COURT: Touch it, let me see. Okay.

MR. CRAWFORD: Okay.

BY MR. CRAWFORD:

Q Mr. Parsons, for part of your testimony, you prepared a slide show, is that correct, for -- to show the jury how dryers work and so forth.

A Yes, I did.

Q Okay. And you have an animation and it shows -- so, we're going to try to get through this. If we get it working, we'll bring it back. If not, we're going to use some photographs to try to have you testify, okay?

A Okay.

Q All right. Let's start with dryers. How they work, and how the airflow travels through them. And --

(The attorneys engaged in off-the-record colloquy)

MR. CRAWFORD: Now, Judge, I'm going to need this ELMO top here, so I don't know if we can --

(The attorneys engaged in off-the-record colloquy)

BY MR. CRAWFORD:

Q So let's go back to what we were talking about. You

prepared an animation for airflow, how dryers work, is that correct?
A I did.
Q Okay. Can you fast forward and get us to that?
A Yes, this is a gas dryer animation, specifically a -- an Electrolux ball hitch.

MR. KOTT: Your Honor, I believe --

THE COURT: Yes?

MR. KOTT: I believe --

THE COURT: This is an Electrolux what?

THE WITNESS: It's an Electrolux gas dryer which utilizes the ball hitch, meaning it's the same exact configuration --

THE COURT: No, speak into the microphone. Don't turn toward me.

THE WITNESS: It's the same exact configuration a the subject Ellis dryer.

THE COURT: "Configuration." What does that mean? It's not the exact model?

THE WITNESS: No, it is the exact model as the Ellis, meaning the drum, the belt, the burner, the pulley, everything is identical.

THE COURT: Except what?

THE WITNESS: Except for this is a top console and the Ellis is a front console.

BY MR. CRAWFORD:
Q Does that affect the airflow?
MR. KOTT: Your Honor --
THE COURT: Just a second.
MR. KOTT: Preliminarily, Your Honor, I haven't seen this video or this DVD or this presentation. This is the first I'm seeing it.
THE COURT: All right. You can interpose your objections as we go along.
MR. CRAWFORD: Very well.
THE COURT: Go slowly so we have time to --
BY MR. CRAWFORD:
Q Go slowly with this and proceed, please.
A Okay.
THE WITNESS: Do you have a laser pointer, sir?
MR. CRAWFORD: I do.
THE WITNESS: If not, I have one. May I get my laser pointer, ma'am?
THE COURT: Surely.
BY MR. CRAWFORD:
Q Here you go.
A Basically what we have here is an Electrolux dryer. We'll remove the panels, and what we have inside the dryer is a drum. We have the gas burner assembly. We have the blower motor, and then the discharge duct, which is underneath the drum which

exits the rear of the appliance.

As the drum rotates, you'll see the gas burner fires, the trap duct blower motor operates, the drum rotates, this is an air intake, this is the gas burner. Gas burner igniting.

Q Can I stop you there? Is that the back of -- the back where the burner is or the front of the dryer?

A This is the front of the dryer. If you were to remove the front panel, what you would see is where you place your clothes in the drum, down in the lower left-hand corner is the burner assembly. The opening faces you, the user.

Showing just how the drum operates. Now what we'll do is we'll remove -- replace the front panel, excuse me. Remove the front panel so you can see where the lint filter is. There's your lint filter behind the prescreen, this is the trap duct and the gasket that goes up against the blower housing. So, air is pulled down through the filter.

When we put the front cover back on, the blower housing mates to the ductwork, and there is a seal there which makes that interface.

Now with the drum removed, we can take a look. See the burner assembly, we can see the back of the heater pan, and that inch and a half lip that everyone was talking about earlier, the horizontal lip. We can see the discharge pipe or duct, and we see the blower motor assembly and the blower motor, and you can see the belt hanging where normally it would be around the drum.

Showing you the rear of the dryer where the discharge duct is and the air makeup, we put the back panel. The blue indicates cold air being pulled into the appliance. The air comes in as you're facing the appliance at the right rear. You cannot see it, it's behind the appliance. So, the cold air is drawn in, it's pulled through the dryer cabinet and into the burner assembly.

When the burner assembly ignites or turns on, it heats that air, which is being drawn through the burner, heats that air, and it's pulled behind the drum into the heater housing. And for demonstration, you can see the red where this would be heated air, now the drum was put back in and the heated air comes through the drum, intermixes and goes through the clothing to dry the clothing and remove the moisture from the clothing. So, you can see how it gets pulled through the drum. It now heads towards the prefilter, and the lint screen is directly behind this so it gets pulled through the lint screen, pulled down through the ducting that the lint screen sits on, and it will get pulled towards the blower motor.

Once it hits the blower motor, it now goes from suction to positive pressure. So, the air is being drawn through the dryer -- and all dryers work this way. The air is being drawn through the dryer until it gets to the blower. At the point of the blower, it is pushed out of the appliance.

So, you see the warm moisture laden air being pushed out the actual ductwork where it would be connected to some type of venting, whatever the transition duct material was.

So, we have cold air being drawn in, heated, warm air being pulled through the clothes, through the lint screen, and then discharged under positive pressure out the back of the appliance.

Q Okay.

A Okay.

Q Do you have photographs of dryers to show airflow in ball hitch dryers?

A I do. I'm trying to bring those up now. This -- there we go. We also have the bulkhead animation, sir.

Q Okay. And this is a comparison to the one you just showed us?

A Correct.

Q Okay.

A This is a much shorter video, much more simplistic. Basically what we have is a bulkhead style appliance, meaning dryer, gas-fired. Just so you could understand the difference between a ball hitch and a bulkhead, and we'll get more into detail as we move through here. Basically the way a bulkhead dryer works, it pulls air in from the back, runs it through the heater assembly, goes up the back in a straight duct, which is behind the drum, pulls across the clothing load to absorb the moisture, goes down through the lint screen, down through the duct, through the blower motor, and the out the ductwork, out the back.

The primary difference between a bulkhead and a ball hitch is a ball hitch has a single pivot on the back of the drum and the drum is one piece on the back with multiple holes.

A ball hitch, the back walls -- excuse me. A bulkhead, the back wall of the dryer is stationery and a duct runs up that back wall and just comes out this smaller group of holes. So, the back of the drum does not rotate. And I've got better photos to show that as we move through this.

So, the airflow here --

THE COURT: Now tell us again which is which.

THE WITNESS: This is a bulkhead dryer. This is like -- this is a Whirlpool or a Maytag design. The warm air -- the cold air gets pulled in, heated, it just goes up the short transition duct, it then comes through the clothing, through the lint screen, down the trap duct, to the blower, and then it is pushed out the appliance.

BY MR. CRAWFORD:

Q Mr. Parsons, is there a -- is there a horizontal surface in this design?

A No. The difference -- one of the primary differences is -- we have photos to show that as we work through. This design keeps the air velocity high behind the drum, meaning it's a small duct. And that duct travels from the burner up to these discharge holes, and at the discharge holes, it goes from high pressure to low pressure.

So, any lint that may be in suspension when it -- it's like the Mississippi River. As it washes and moves really fast as it gets down near the delta, it spreads out. All the lint and silt that was picked up over its course is deposited out in the delta. It's the same thing here with lint, it's called capture velocity. The lint is entrained in the air and in the clothing load, it goes from high pressure to low pressure. So, all the lint drops out in the clothing.

On a ball hitch style, that event happens behind the rotation drum. So, where that shelf was -- and, again, we'll go through some photos -- where that shelf is is where it's below pressure. So, anything in suspension, meaning lint, can drop out behind the drum. Where in this design, what drops out in suspension is in the drum, not behind the drum. So, you'll see the airflow moving through.

Now I've got some photographs that -- just to answer your question.

Q Yes.

A To show --

Q And that's just a picture that shows what you just told us on the ball hitch, is that correct?

A This is a ball hitch diagram. It pulls through the heater. Remember I talked about high pressure and low pressure?

Q Yes.

A What happens here is the air comes in at high pressure. Right at this interface here, it goes from high pressure to low pressure behind the drum. So, you have this drum that sits in front of this heater pan with low velocity air behind it versus on a bulkhead style, there’s a duct which keeps the air at high velocity, and it goes to low velocity in the drum.

Q I don’t know if you can tell on this diagram, but Number 3 there --

A Yes, sir.

Q -- does -- does Number 3 show where the heated gasses are coming into that pan?

A Yes, sir. The heated gasses travel right here, this burner is installed right at the base of this transition duct. The heated gasses travel up, and right here enter into the heater pan behind the drum.

Q So, there’s like an opening in that horizontal surface?

A Yes, sir. There’s an opening approximately two inches by seven or eight inches, sir.

Q Okay. Thank you.

A No problem.

Q All right.

A Here is an actual gas dryer of Electrolux, again, top console. Only difference, Mrs. Ellis's had a front console so it could be stacked on top of the washing machine.

If you stack this one, you would need a step ladder to get to the controls.

There's the back of the dryer. Discharge duct. This is the air intake. Cold air is pulled in. Warm, moisture laden air is discharged. I'm just showing the cold air being pulled in on this slide, warm moist air being discharged.

Now with the front cover and the drum removed, the air comes from the back, pulled in, it's cold air. As long as the burner is operating, you have heated air now coming up behind the drum. And this is the opening that we just talked about, this is where the warm air enters behind the drum. And at this location, it goes from high pressure to low pressure behind the drum.

The horizontal lip that everybody keeps talking about is right here.

Now with the drum reinstalled, the warm air comes through the drum, through the tumbling clothes, and heads for the lint screen. With the front panel removed, it comes down through the prefilter, through the lint screen, and then what's called the trap duct. The warm moisture laden air travels to the trap duct, then it travels out of the trap duct, right to the blower housing.

The blower housing pulls the air through the dryer.

At this point, it's converted to positive pressure and it pushes the moisture laden air out of the dryer.

The bulkhead airflow -- this is a bulkhead appliance, gas. Air makeup is through the same louver, but on the opposite side. Air discharge through the same four inch duct, which is standard. This dryer also pulls air in from three other locations.

So, we have our cold air in blue being pulled into the appliance through the rear. We have the moisture laden heated air being pushed out to the four inch duct.

Inside the appliance, all of the cold air is pulled to the burner tube. The appliances -- the burner tube on the ball hitch is on the left side, this happens to be on the right; same principle, though. The air is heated and it's pushed up this transition duct behind this sold panel which does not rotate.

That warm air enters the drum at high pressure, converts to low pressure, and we have the warm air intermixing freely with the tumbling clothes and absorbing moisture. The moisture laden air is then drawn into the prefilter and the lint screen, and it's drawn down into the trap duct.

The trap duct removed, it's drawn into the blower housing. And at this point, it goes from a vacuum to positive pressure, and the moisture laden air is pushed out of the appliance.

Now let's look at the difference in the heat ducts between the two. We've talked about now how the airflow works. So, if we put them side-by-side, ball hitch on the left, bulkhead on the right. We can now compare how they look.

The ball hitch has a -- it's a one-piece drum with a back panel with multiple perforations. The bulkhead has a single opening on a fixed back wall.

When we pull the drum out, you can look right through the bulkhead drum because the back wall is fixed. It has a seal on the front and the back side.

The bulkhead dryer -- I've now turned the drum around so you can see it -- this is the pivot, and this is the actual back of a Electrolux drum. The pivot for the ball hitch is in the very center and is mounted on the back of the drum.

The bulkhead uses idler wheels to support the drum. You need some mechanism to hold that drum since we don't have the pivot. So, that open drum rotates on these two pivots.

Here's a closeup of the pivot. Here's your two ball hitches. The difference is, again, we go from high pressure to low pressure behind the drum. Here, we go from high pressure to low pressure inside the drum.

Here's what the transition duct looks like when we spin it around. You see -- you can see the transition on the ball hitch. It's behind the panel. When I spin the panel around, you can see how this is a fairly straight duct so it doesn’t allow the air speed to slow down until it gets into the dryer.

I’ve now taken another bulkhead and I’ve removed that fixed panel, and you can see the transition duct how it -- the gas heats the air. It goes up the transition duct and is pulled into the drum. So, we go from high velocity to low velocity, again, inside the drum.

On the ball hitch, we go from high velocity to low velocity behind the drum.

Q You keep on talking about the bulkhead. How long has that been on the market?

A Since the 1950's.

Q Okay.

A Now the way lint collects in a ball hitch dryer -- this is showing a dryer now with the drum removed, front panel. And we’re going to compare it as to how it collects in the bulkhead.

We see the ductwork, again, it’s a fairly straight piece of duct, so we keep the high velocity up. Here’s the duct removed and taken out. Again, you can see it’s a very straight duct, it keeps velocity up.

And when it enters the dryer, the high velocity change occurs, again, right here at the close. On the Electrolux, again, it occurs behind the drum.

Now what I’ve got is a couple of exemplars. These are bulkhead dryers, and I've got a handful of exemplars that have been involved in fires to show where lint collects or does not collect. The ducting is, again, behind the fixed panel.

When we take the ducting off, there was no lint at any portion of this duct. The duct is clean. The was no horizontal surface for the lint to settle or drop onto.

Same thing on exemplar Number 2. We have the same transition duct. We have the same exact transition duct. There's no area or shelf for lint to collect. And, remember, it's high velocity.

Again, this shows the ductwork. You see, there's no lint in this ductwork anywhere. It is clean. Again, high velocity.

Example Number 3, there's no lint whatsoever in any of the openings.

We look at the burner tube, we look inside the burner tube, there is no lint.

But yet there's lint in other places of the dryer. You can see burn lint on the floor of the dryer. It's not that this dryer doesn't make lint. All dryers produce lint, period. It comes down to how do you manage that production of lint, and where do you allow it to collect. Do you allow it to collect in an area away from the heat source? Or do you allow it to collect in an area adjacent or right next to the heat source?

We'll look at exemplar Number 4, another ball --

another bulkhead.

Q Mr. Parsons, let me stop you there for a second. When you're talking about heat sources, what kind of heat are we talking about in these respective dryers?

A In both of these appliances, we're talking a minimum of 1,550 degrees, and it could be as high as 1,600. That is the flame temperature of either propane or natural gas.

Q And what kind of distance in the ball hitch from the flame up to where that horizontal shelf it? What kind of distance are we talking about? Is that a foot? Two feet?

A Let me show you a picture of that. That may answer your question. Right here we have the open flame at the very base of this transition deck. We're talking about four inches, approximately, maybe five inches from open flame to where we enter right behind the drum. And at this location, I have recorded those temperatures with a dryer with zero restriction.

And what that means is no ductwork whatsoever. So, zero restriction. The temperatures are approximately 800 degrees Fahrenheit. With a properly vented dryer by manufacturer's standards, including Electrolux, a .75 inches of water column, it is 1,100 degrees.

Now there was some question this morning regarding the ignition temperature of lint. There's a range. And I believe that we'll hear from Mr. Crabtree. He feels it's 450 to 600 degrees. I'm not going to argue with that. I have a tendency to be more conservative. I look more like 650 to seven. I'd rather err on the side of caution here.

If we have lint that collects at this location -- and I have a study, we'll go through this -- if we have lint that collects at this location with an ignition temperature of 700 degrees, a properly -- a dryer with no vent system is 800 degrees. A dryer with a properly vented .75 inches of water column is 1,100 degrees. If that lint comes in contact with those hot gasses, it will ignite.

Q What happens to the temperature in that area where the horizontal lip is if a -- if a piece of lint falls down into that tube, does it affect the temperature at that point?

A (No verbal response)

Q If a lint -- a clunk of lint falls down onto that flame --

A Yes.

Q -- does that increase the temperature of the gasses?

A No.

Q Okay.

A It increases the energy, not the temperature. Just so you understand, if I was to light a piece of paper, it would have an ignition -- a flame temperature of about 1,575 degrees, maybe 1,600 degrees.

If I was to take gasoline and ignite it, the flame temperature is actually less, that's 1,500 degrees.

Most materials in a normal atmosphere -- not accelerated -- burns between 15 and 17 hundred degrees. So, gasoline actually burns slightly cooler than paper.

So, if I drop lint down here, lint is cellulose base material. Cellulose base material is what paper is made out of, it burns somewhere in the 1,500 degree range. So, it's actually slightly cooler than the propane or -- actually this was a natural gas appliance. It's slightly cooler than the propane by 50 to maybe as much as 100 degrees cooler.

Q And in --

A But if it drops down there, it will ignite, sir.

Q And in the Ellis matter, it's natural gas, did you say?

A Ellis is a 44 -- it is natural gas, that is correct. To speed things up here a little bit, we'll move to the ball hitch. The ball hitch -- I'm going to show you a couple of exemplar here -- exemplars that have been involved in fires. What we see is is lint that collects behind the drum. And, again, the burning gasses come up, they work behind the drum, and they go from high pressure to low pressure, and then they then travel into the drum. Where the lint collects is at this heater pan.

I will show you testing that we have done, meaning myself, has done at the Wright Group where we've tested ten towels, put them in a brand new dryer with brand new towels that were laundered, meaning washed, and ran them ten revolutions with a restriction of .75 inches of water column, which is the maximum allowable by Electrolux. And I'll show you how the lint will begin to collect, even after ten times at this location.

This is exemplar Number 2, we see lint.

Exemplar Number 3, more lint.

Q Upper left-hand corner, what's that? Is that just a burn mark?

A Right here?

Q Yes.

A This is lint that is adhered to the back of the drum. Moist lint will stick to vertical surfaces specifically when you slow the air velocity down. Where on a bulkhead, I never see any lint inside of the duct because it's high velocity. Once you slow it down, it can now adhere to the back wall because it's lower velocity, and it drops out of suspension.

Again, additional lint that collects behind the drum.

Lint that collects behind the drum.

Q Okay.

A This dryer, I believe, is an exemplar we use called the Cushing dryer. Exemplar, more lint behind the drum.

Q Could you go to lint -- do you have any pictures of the lint collection in the Ellis matter?

A I believe so. Yes, let me just move forward then. Lint also collects on the back of the drum. Before we get there, we see lint on the back of the drum, lint on the rear of the drum, lint on the rear of the drum. Remember in a bulkhead dryer, there is no back of the drum. It's a fixed panel with a controlled duct that lint does not collect in.

So, these are all -- and I actually have a short video here of lint behind the drum, and I can show you how it -- how tenuously it's attached to the rear of the drum. This is a dryer that I personally worked on. I took the photos. This is my finger and hand. And you'll see the way the lint is hanging. So, that can drop off during rotation. It can drop at the 6 o'clock location. It could also drop off and drop into the burner tube. So, we see how it's tenuously attached to the rear of the drum. All right. We'll continue on.

To answer your question, sir, I believe I have -- this is the Ellis dryer. I wish these photos were a little brighter. This is the subject dryer. We can see that there's lint which is collected behind the drum. Again, lint behind the drum.

This is that lint behind the drum, it's four inches tall maybe, approximately, three inches by 11 or 12 inches across that's collected on that horizontal shelf.

Very difficult to see, but this -- we're looking down, here's the lint. And it actually at one point was slightly over the transition duct where our 800 to 1,100 gasses are. But at that location, it's actually burned away.

Again, we can see here's the lint behind the drum on that vertical location or horizontal location, excuse me. There's approximately four, maybe four and a half inches of lint in elevation. It's approximately 11 inches in width, and it's about an inch and a half deep. That shelf is about an inch and a half.

Where the Ellis ball hitch was, it's also loaded with lint. And you can also see lint that's accumulated on the heater housing. See if we have a better picture of that. Here we go. This is all lint that's collected all on the heater housing, all on that -- the face of that heater housing.

The Cushing dryer that I talked about, we're just going to go through this real quick. This was an exemplar. I know how this dryer --

MR. KOTT: Your Honor, excuse me. I'm quite certain I have not seen these photos.

MR. CRAWFORD: Let's not -- let's pass through the Cushing, okay?

THE WITNESS: These photos are in my report, by the way, the Cushing dryer is one of the exemplars.

MR. CRAWFORD: Oh, they are?

THE COURT: That may be in your report, but that doesn't mean that it's relevant to this proceeding.

MR. CRAWFORD: Well --

THE COURT: Go ahead. Or admissible.

MR. CRAWFORD: Let's just pass through the Cushing.

THE COURT: All right. Let's move on.

THE WITNESS: Okay, yes.

BY MR. CRAWFORD:

Q And tell me about the high limit contact analysis that you did in this one.

A Okay. As part of our testing, we have evaluated the high limits on dryers. When a dryer -- when the dryer temperature is elevated behind the drum, all manufacturers use a safety. And what that safety does is it recognizes or monitors the temperature. Once that temperature exceeds a predefined limit, the contacts open. It's just like a light switch. It turns on, it turns off. And as long as the contacts are closed, the dryer functions normally.

The minute that there's elevated temperatures behind the drum, the contacts open. Once they open, the dryer still operates but the heat source shuts off. So, if it's an electric or a gas, if it's a bulkhead or a ball hitch, they all work on the same principle. As you elevate temperatures in the appliance, the safety turns the heat source off, but leaves the appliance operating so that any excess temperature can be pulled out and then discharged out through the house vent system.

I had the opportunity to look --

THE COURT: All right. Let's get the next question.

MR. CRAWFORD: Yes.

BY MR. CRAWFORD:

Q What was your analysis of the high limit contacts?

A Yes. This is a high limit contact that is brand new out of the box. If you take a look there, you'll see it's shiny, it's clean. It is tested, by the way, from the manufacturer. So, you can see the signs of it being tested. They tested -- Thermodisc, who makes this, tested approximately one to two times. They physically, with a load, heated. It opens and closes and opens and closes to make sure it functions appropriately.

This is a contact that's been cycled a lot. The surface is melted, it's pitted, it looks like the surface of the moon. Every time the contact opens and closes, it creates what's called a parting arc. Thousands of degrees of temperature.

If you've ever unplugged your vacuum cleaner while it's running, you see that blue spark at the plug, that's a parting arc. That's what happens every single time this opens up. So, you get that blue spark, that is thousands of degrees. These contacts melt at 2,000 degrees or under.

So, what happens is you get melting on the surface. Now when they close, they resolidify, it opens again, another parting arc. So, that cycle happens over and over and over again, and it's very easy to look at a contact that's been cycled in excessive amount.

We've done testing at the Wright Group on contact analysis. We've cycled them 500 times, you cycle them 1,000 times. I can tell you this is more than 1,000 times based on our comparative analysis of our testing.

Now what I needed to do is look at the Ellis dryer. I needed to understand what that contact looked like --

THE COURT: All right. Just a minute. Just a minute. See I don't -- I want this to be question and answer.

MR. CRAWFORD: Sure.

THE COURT: It has to be.

MR. CRAWFORD: Sure. Well -- okay.

BY MR. CRAWFORD:

Q How does the Ellis compare to those two?

A I looked at the Ellis contact, and it clearly has cycled. Not excessively, but it has cycled and you can clearly see the difference between what Mrs. Ellis's looks like, one that's heavily cycled, and one that's brand new.

So, I'm not here to tell you that it did not cycle. The dryer definitely cycled off the high limit at some point in time.

Q Okay. Now let me ask you this: Did you give opinions within a reasonable degree of scientific certainty in this matter?

A I did, sir.

Q Okay. Could you tell us what those opinions were? And then we'll backtrack them and try to figure out how you got there.

A Okay. My opinions are that the ball hitch design is defective. Now what I needed to do is just because the Ellis dryer caught on fire doesn't mean the defect is what was responsible for the fire.

So, I went through my entire analysis to determine what caused the fire in the Ellis dryer. After I completed my analysis, I determine that the design defect is what allowed the lint and the heat source to come together and to produce a fire.

Q Okay. And how did you come to that conclusion? What methodology did you use and what other -- you said you had -- did you consider other factors or didn't you?

A Oh, yes, sir.

Q Okay.

A The litany of testing that I did, the subject dryer was analyzed. We looked at all of the components, we looked for electrical activity in the appliance, frictional heating, all other ignition sources were evaluated and ruled out. There was no other ignition source other than the lint coming in contact with the first fuel, being -- the lint coming in contact with the gas flame, which we have evidence of, after the fire.

Additionally, we have done lint collection testing, so we have looked at all of that testing and applied the information that we learned through all of our data points of how lint collects in a ball hitch dryer, and we've applied that. Additional --

Q Could you show that test?

A I can. But additionally, there's witness statements, what Mrs. Ellis saw.

Q Right.

A There's all of the other -- and fire patterns within the appliance. But I can show you testing --

MR. KOTT: Your Honor, before he puts the testing up, could he tell us what the testing was?

THE COURT: Yes.

MR. KOTT: Because it --

THE COURT: Yes, that's important.

THE WITNESS: Yes, ma'am. Yes, sir.

A The testing. I believe I would include a protocol. Okay, this protocol is too small to read. So, what I did is I summarized it. It's a multiple page protocol. This is basically the summary of the testing. All of the dryers that we talk about today on the testing all followed the same exact protocol, whether it's a ball hitch new, ball hitch used, or a bulkhead appliance.

So, we -- they tested -- the dryers were all tested at a maximum allowable restriction. That means that the vent was restricted to .75 inches of water column. That's the maximum restriction that Electrolux allows, and generally all dryer manufacturers subscribe to that .75 inches of water column.

There were 20 loads of towels that were laundered, meaning washed, and then placed in the dryer. But those 20 towels consisted of two groups of ten, both of them were different colors. I wanted to see, after the first color, if it deposited any lint. If, through operating the dryer, would that lint be removed and be displaced by the second color lint which would be generated from the towels.

Now towels are probably the worst thing that you can wash as an end user. They produce lots of lint. The purpose of this test was to show how lint collects in an appliance. And with 20 loads of towels, if anybody owns a swimming pool and has the kids over, you could wash 20 loads of towels in a week or two. But I'm not suggesting that every single load is going to produce this type of lint. This is a demonstration so we understand how lint collects within the appliance.

We'll use a new Electrolux. We'll use a used Electrolux and a used Maytag so we can evaluate the lint collection mechanism. And -- I don't really care what the -- the test results will be the test results.

Now this is a Electrolux brand new gas dryer. If you look, there's no lint anywhere. It's brand new. The seals are new. It's white, it's clean. We bought it brand new, unpackaged it, set it up in our lab and ran it. So, it had never been used. It was bought from a local -- like Bernie's or Lowes or Home Depot where we normally buy our new appliances.

Then the back of the drum, crystal clean. What you're seeing here is grease, that's normal. They grease that pivot so that it doesn't squeak or reduces the -- reduces the friction. There's no lint whatsoever on this appliance.

The first load was purple towels. We weighed the towels, and how much the towels weighed: 11.25 pounds. So, we're underneath that 14-pound limit; we're not overloading this appliance. We're washing ten towels. And, again, 11.25 pounds.

Test number ten. I took the dryer apart after the tenth test. And what we're seeing is you can see purple lint. If the lights were out, it would be a lot clearer, but there's plenty of -- there's purple lint that is collected all around the back of the drum.

There's -- the first ten cycles were already collecting lint on this horizontal shelf. So, I'm beginning to understand now how lint actually moves through this appliance and how it collects.

Now we change colors to a yellowish towel, yellowish green. And at 20 cycles, again, they're slightly over 11 pounds. We have the original blue lint, and now we have some of the yellow lint beginning to collect, or purple lint.

Now we actually got some discoloration of the lint already. This is thermal breakdown. This means at some point, it came in contact with some temperature and began to break down. But we've got a little bit of collection of the yellow towels.

Now -- so, again -- and we have more of it. This is setting on top of the purple lint. So now we have stratified, and I've got photos of that as we move through here.

But let's go to the second test. The second test is a -- this mouse is very sensitive -- there we go. The second test is a used electric -- excuse me -- used Electrolux gas dryer. There's some lint, there's some lint on the back, there's some up around the high limit, but there's maybe a quarter inch.

Q How many cycles is that?

A I cannot tell you. This was harvested from a -- we buy used appliances all the time so we can see how they come out of the field. This is one that is in relatively good for an Electrolux. There's not very much lint here. Generally we're used to two and three, four inches of lint behind the drum. This is a quarter inch.

So, I wanted to test to see if I put -- took a used dryer and put ten towels, how would that overlay and how would that stratify, and how would that lint collect. And generally speaking, if you have -- consider this like a -- like an air filter, a clean air filter will pass a lot of air. A dirty air filter traps more particles, that's why you need to change your air cleaner in your car or it becomes dirty, because it can't draw any air through.

So, a dirty filter becomes a better filter, and there's a reason why I'm saying this. We'll go through the testing -- oh, there we go. There is really -- this dryer is in -- for an Electrolux, is in great shape. There's very little. But, again, we see some of this thermal breakdown. So, I know that some of these components -- I'm not suggesting they burned. I'm just telling you that they've seen some elevated temperatures. Generally speaking, cellulose base material, which is what lint is, begins to change color first as you heat it.

I'm sure people have heated paper, and you see it turn brown first, and it eventually catches on fire. That brown happens generally at 400 degrees Fahrenheit. So, I know that this material that's charred, and this material here that's discolored, I know that that saw temperatures of at least 400 degrees.

I looked at the back of the drum. We have some -- some minor lint buildup, not a lot by any means.

Ten tests, blue towels. I think we're at slightly over 11 pounds. What you can see is after we ran it ten cycles, you can see blue lint collecting.

Now you can also see it collecting on the back of the drum. This clearly has collected more than a brand new one, and the question is why. It's because there's other lint for this new lint to stick to. The surface isn't as smooth, you now have other fibers which they can cling and hook to.

Q Mr. Parsons, how long does it take for ten cycles to go? Are you setting these cycles -- each one for a half hour, 20 minutes? What -- how long?

A About an hour and ten minutes to dry these towels because they were laundered, they come out of a top loader, not a front loader, so they're fairly wet when we put them in. The new front loaders dry them much better. But I wanted to be consistent with our testing. We use the same washing machine for every test we've ever done at the Wright Group. But an hour -- approximately one hour, ten minutes. So, this dryer has run in ten cycles, about 11 hours of continuous use.

However, obviously we laundered the towels, dried them, relaundered them, dried them. So, this test, don't picture a day, this test takes three or four days because we have to go through the laundering process. And it's tough to get people to work through lunch.

But anyway -- here we go. Now here's a closeup. You can see the blue lint collecting on the back of the drum.

Now here is the heater housing. We have collected substantially more. The only reason why we've collected more is the other dryers were brand new, a smooth surface. The smoother the surface, the easier it is for lint to slide and move around. Once we've got lint collected, you now -- it becomes a rougher, coarser surface. It's much easier for something to stick to this.

If you were to walk on a slippery platform, all right, and you found it to be very slippery, if you sprinkled some gravel or sand, you'd get good traction. That's exactly what happened here, the lint has now good traction so it could stick.

Now you take a peek, you can see it's built up a little bit more, and it's just overlaying on top of.

Now in all fairness, this is a little deceiving. This is actually collecting a little bit in the back wall. We're probably only talking a quarter inch or so, you're just seeing it migrating up the back wall.

Now what we did is I took -- back to our green or yellow towels, greenish yellow, at 20 revolutions. Now this is unique. This dryer caught on fire in our lab on the seventeenth revolution. And what happened is most of the blue lint was burned off, and most of the yellow lint was burned off. And how do I know what caught on fire? At 17 revolutions, it was running in the test facility and I heard an unusual, almost like a rumble, and it happened ten, maybe 15 minutes into the dryer load. And I looked at the dryer, there's no smoke, there's no issue. Our building has an air makeup system. So, you can't reprocess lint in the building, it ejects air outside and they have -- we have filtered air that comes into our lab. So, I went outside looking for smoke, no smoke.

I see the -- there's contractors out in the yard, they trim the grass and whatever. I said, ah, maybe they're running the weed whacker, whatever. And so I just -- I wrote it off. I continued on -- because we don't -- you know, if you don't take the dryer apart, and you don't know what's happened, we continued on. When I got to load 20, that's when I realized I had a problem.

I now have -- I want to see if I can zoom in on this. The plastic bearing and all the lint around it, the lint burned completely and it -- it was around the bearing, and the bearing is 60 or 70 percent gone. It's plastic and it burns.

Q Could it continue to operate with that bearing like that?

A Yes, sir. And in many cases, we have what's called a bearing failure case where that bearing, because it -- whether it's heat damage, for whatever reason, fails, it goes to metal-to-metal, and then the spindle eventually fractures and the drum drops down. On an electric dryer, that's deadly. On a gas dryer, generally it's not as much of a problem.

Q We don't have that in the Ellis case, do we?

A No, sir. No, the bearing -- the bearing unit was burnt by the fire. I could tell the bearing was fine before the fire. The spindle is unscored. It’s in great shape.

So, what I start looking -- you can see the burnt lint. There was no burnt lint in this dryer before. I have burnt lint, and I now have this green towel, all right, where did all my blue -- you can see a little bit of blue up here. So, I probe a little farther. And what I did is I just flipped over so you can see the blue lint that was against the back, then you can see the green lint, but on the front side -- let me see if I got that photo. You can see where that lint was charred, and it wasn’t charred at test ten.

So, what I concluded was that at test 17, what I heard was a fire behind the drum and I just didn’t recognize that it was a fire behind the drum until I disassembled the dryer.

Now I went to a -- I took a bulkhead dryer. This is a -- either a -- I think this is a Maytag dryer, and it’s a used dryer. And I wanted to run it through the same exact test. Everything’s identical. Restrictions are identical, fuel supply is identical, the back pressures are identical, the washing machine, the towels, everything is exactly identical. So, what I do is I take it apart, this is the only horizontal surface. It’s at the bottom of that duct. If we could -- where that duct is, the burner tube plugs into that duct, then that duct goes up behind the rear panel and discharges into the drum. This is the only horizontal surface. That's it. There is no other horizontal surface.

And as you see, this is dirt and sand. So, what happened is is at some point during the life of this dryer, dirt and sand had worked its way in, it got settled here, the velocity was nowhere near enough to keep that sand in suspension to pull it right back through the clothes.

So, what we did is I ran this ten times, and then 20, just like the other dryers. I'm going to go right to 20 because ten yielded no results. At 20, we have no lint whatsoever in the transition duct.

Q Where is the lint?

A Any lint that was produced by this dryer was captured in the lint screen, and then ejected out the rear of the dryer. It did not catch or collect behind the rear panel. Let me see if I can get a -- there we go -- behind the rear panel because the transition duct keeps the velocity high. The lint would -- if the lint is in this air stream, it drops out in suspension within the clothes load.

MR. KOTT: Your Honor, I have an objection to testing done by others. I can't cross-examine --

THE COURT: Yes, I understand that.

MR. KOTT: -- testing done by others.

THE COURT: I think we should skip by that.

MR. CRAWFORD: Okay. Very well, Your Honor.

BY MR. CRAWFORD:

Q Okay. You have to come to a conclusion that you had a heat source and a fuel, right?

A Yes, sir. I did -- to have a fire, I needed a heat source, I needed fuel, but that isn't enough. I need them to come together and the heat source has to be competent to ignite the first fuel.

As an example, if we were going to go to a campfire and I took five or six big logs, and I took a match, lit it, and tried to light the logs on fire, what would happen? Nothing.

If I take that same match and light a piece of paper, what happens? It catches on fire. So, in one instance, a match is a competent heat source for paper, it's not a competent heat source for logs. So, I have to understand what the energy is, what the temperatures are, and the configuration of the first fuel.

So, what I did is -- and I talked about this a little earlier -- to determine the competency of the heat source, I thermal coupled the transition duct, and I told you it was 800 degrees and 1,100 degrees at no restriction and a .75. So, the test was performed at .75 inches of water column, and then I'll introduce in this test a piece of lint right at that opening of that burner chamber.

MR. KOTT: Boy, Your Honor, I don't know what "I'll introduce a piece of lint" -- that's not -- nobody in this case put through a piece -- I don't know what to call it -- introduced a piece of lint.

THE COURT: Yeah, what -- explain this.

MR. CRAWFORD: Yes.

BY MR. CRAWFORD:

Q Why would -- Mr. Parsons, why would that be relevant in the Ellis case?

A First of all, this test I did -- I misspoke, I apologize. Lint was allowed -- was placed at the 6 o'clock location like we always see on Electrolux dryers, and then I started the dryer. Don't picture I dropped lint in, that test comes later.

Q Okay.

A This is just lint setting at the -- and it's lint from our previous test, so it's true dryer lint, and it's placed. And I have a photograph, I'll show you what it is.

Q And is that a condition that was similar to the Ellis case, the lint accumulation?

A Yes.

Q Okay.

A Yes. It's -- and not just the Ellis, but our history has shown that lint collects at that 6 o'clock location. Our history has shown the temperatures are sufficient. Our history has shown that we have numerous fires at those locations.

So, here's what I looked at. Electrolux's expert in his report says lint is 450 to 600. Again, I'm more conservative, I think it's higher, I'm 650 to seven, but that's acceptable.

Conclusion: If lint was -- was at the heat duct and temperatures -- are the temperatures sufficient to ignite the lint? Based on the scientific method, I need to prove that. Now I can think about it cognitively and say, um, 1,100 degrees, 700 degrees, yeah, it should ignite. But I have to know for a fact that the temperatures are, indeed, eight, nine, ten, 11 hundred degrees, and I have to truly know the auto ignition temperature to lint. So, why not just do a physical test? Rather than say: I think it's 700 degrees. I think it's 1,100 degrees in temperature. Let's just do the test.

So, what I did, I placed a piece of lint at the duct, and I'll show you what that consists of, once this comes up. Okay. Hopefully that stopped. What we have is is approximately five grams of lint that's just set at the 6 o'clock location.

Q How would five grams compare in the Ellis? How many grams would you estimate the Ellis dryer had?

A 20.

Q Okay. Thank you.

A Maybe more. I guess conservatively 20 grams in the Ellis. What I did here is just placed this lint -- now we have glass panels, so we can look. This dryer is -- all sides have glass so we can take video and photos, and I can visibly see what's going on. Then up in the upper right-hand corner, what you're looking at is a different view angle of this lint. And it's looking right down the transition duct and the lint because I had other cameras mounted inside this dryer looking at that location.

So, what we did is started the dryer. And this video is excerpted because normally the dryer will run through a proving cycle. So, we've sped it up here. You'll see the glow bar, you'll see the burner ignite. It hasn't ignited yet. You have to wait for the -- once the burner ignites --

Q Would you expect the same result --

A There we go. Now -- go ahead.

Q Would you expect the same result in this test if the drum was in place?

A Yes, identical, there's no difference.

Q Okay.

A All right. There's airflow through this drum. What you can -- through this appliance. What you -- this blower motor is actually running, and the only place for it to pull air, okay, is from here.

Now I would say that the velocity was less through the burner, but if the velocity -- if all of the air was going through this burner, it pulls that burner flame up higher and it'd be much easier to ignite this lint. This actually allows less energy to go up this duct to ignite this lint. And you'll see that lint freely burns.

So, our testing supports our conclusion that lint ignites somewhere at 700 degrees. The burner temperatures are higher than that based on our thermal couple reading. But our physical testing tell us that now that introducing lint into that area, if it comes in contact with those temperatures, it will ignite.

Q Well, if it ignites back there on that lip, the horizontal surface, how would -- how would you expect the fire to propagate? Would it just burn itself out? How does -- how does a fire go beyond that lip?

A What generally happens is -- and we have done that test, and we can show you as we move forward. Generally a small piece of that lint will become ignited. And as it begins to burn, it actually breaks away from the massive lint, that blog of ten, 20, 30, 40 grams. It breaks away from that and it gets pulled right into the back of the drum.

Now two things can happen: If it's at the beginning of the load, the clothes are wet. If that lint that's on fire gets into those clothes, it will not propagate. Simply the towels being wet and rotating will effectively stamp it out. It just -- it quenches the fire.

However, when dryer -- when clothes are wet or towels are wet, they -- it's called riding the rim. They ride the rim until they dry. As they're beginning to dry, then they begin to drop down through the center. So, you have an opening right in the center of the appliance. What happens is is if that lint that's on fire comes right through the center and misses the towels while the towels are wet, if it deposits in the lint filter, guess what's in the lint filter? Lint. So, there's one mechanism.

Second mechanism is 60 minutes in. Now your towels are 140 degrees. They're preheated, that's exactly -- the easier -- the more you heat your target fuel, your initial fuel, the less energy you need to ignite it. It's always easier to heat preheated fuel. As an example, try starting a diesel in the wintertime when it's 40 below zero. It won't start because that fuel will not ignite, it's too cold. Plug it in, warm up the heating system, it will now start and ignite. It's the same mechanism. So, it's easier to ignite the higher the temperatures, the easier it is. Same temperature, just less energy.

So, 60 minutes in, towels are a 140, maybe 145 degrees. Flaming amber comes in, sets on 145, 150 degree towel: poof, up in flames it goes. Now they rotate in the drum, and sometimes I've had -- I've done testing, sometimes they do get stamped out. I'm not going to tell you every single time a piece of lint gets drawn into clothing that it propagates into a full-blown fire. That's an unrealistic expectation. I've done multiple full-scale burns, and I know I've been asked this question on depositions before, so maybe I'll hear the answer later --

THE COURT: No -- well, wait, wait, wait. Next question.

A Well, anyway, it's about 20 to 30 percent.

THE COURT: Just a second. Just a second. Question and answer.

BY MR. CRAWFORD:

Q Mr. Parsons, your --

THE COURT: Question and answer, that's the way this has to proceed.

Q How will you expect, okay, to propagate all the way through the dryer? You told me about how the lint gets through the drum. How do you expect the full transition to take place? How will that fire move throughout that dryer?

A Two mechanisms: One, if it gets embedded in the lint trap, the lint trap catches on fire.

Two, if the load catches on fire, that energy is being sucked right into the lint trap. No matter what, the lint trap catches on fire.

Then inside the lint trap, again, there's lint. And if you pull out our lint screen, and if you ever look inside your lint trap, it is loaded. The walls are lined with lint.

And Electrolux, in some models, uses glue, which actually captures more lint.

However, to answer your question, burns the lint on the lint screen, and burns the lint that's in the trap duct. The trap duct is plastic. The plastic catches on fire. It's sucking this fire now through the trap duct into the blower housing. The plastic blower housing catches on fire.

As these items begin to burn --

Q Excuse me. How far is that lower housing from the lint trap?

A The shorter side, probably eight or ten inches. The longest side, maybe 18 inches. That flame gets drawn right down into that blower housing, the -- both those plastics burn, and the plastics that's used on these particular dryers when you light them on fire, they melt and they drop. So, there's thermal plastic and thermoset plastic, one melts when it's on fire, the other one chars in place; these melt. And it melts and pulls -- well, the bottom of the dryer has seams and cracks, it melts out. The plastic puddles underneath the dryer and burns freely outside the appliance.

If you have a clothes basket there, if you have clothes on drop of your dryer, if it's in a closet --

THE COURT: I want -- you know, I don't -- I want you to limit yourself to the Ellis dryer, please.

MR. KOTT: Your Honor, and I move to strike the last eight sentences because I don't think they're related to the fire in his case.

THE COURT: Well --

MR. CRAWFORD: Well, you have --

THE COURT: Re --

MR. CRAWFORD: Okay.

BY MR. CRAWFORD:

Q But you --

THE COURT: Let's move back to the Ellis dryer --

MR. CRAWFORD: Okay.

THE COURT: -- please.

BY MR. CRAWFORD:

Q But you have -- we're going to focus on the Ellis dryer. But your scientific methodology makes you consider all these possibilities, is that correct?

THE COURT: Well, that's not the point.

MR. CRAWFORD: Well, okay.

THE COURT: Let's focus on the Ellis dryer, what the components were there.

MR. CRAWFORD: Well --

THE COURT: What he found when he examined that dryer.

MR. CRAWFORD: Okay.

BY MR. CRAWFORD:

Q With regard to the Ellis dryer, what did you find and what

conclusions did you come to, and why?
A The fire moved through the drum, ignited the lint trap, the lint trap -- the lint in the lint trap burned, the plastic duct burned, and the house -- the plastic blower housing burned. It puddled out of the dryer, underneath it's the washer, you can see where to burned down on the front of the washer, and spread to the structure.
Q Did you see Mr. McGinley's report in this matter?
A Yes, sir.
Q Okay. He gave us an area -- you weren't here, but he gave us an area of origin. Is there a difference between an area of origin and a point of origin from a cause and origin perspective?
A Yes, sir.
Q Okay. Did you -- were you able to give an opinion as to the point of origin as opposed to the area of origin?
A Yes.
Q And what was it?
A The heat source was the gas flame, the first fuel is the lint. That immediately puts you at that transition duct. There is no other place in that dryer where that event can happen, period.

So, it's between the open flame and that transition duct. So, we have a point of origin very small.
Q Okay. Okay. Let's -- let's talk about the impact that

venting or ductwork may have on the operation and the safety of a dryer.

A Yes, sir.

Q Okay. Have you studied or done tests on venting to determine how it affects the operation and safety of a -- of dryers?

A Yes, sir.

Q Okay. What have you done?

A We spent six months testing every vent configuration that we could think of. We started with the Electrolux manual, and we tested every configuration in the manual. Whether it was 32 feet and one 90 degree with a four inch hood, with a two and a half inch hood. I think we did well over a hundred and some odd tests with our most aggressive test being 72 feet of ductwork and nine 90 degree turns. That's three times what -- twice of what Electrolux would allow, and we were still under the .75 inches of water column. That's the standard that I'm looking for.

All of the venting --

THE COURT: Don't -- don't -- see I want you to make it simple in kind of small steps.

MR. CRAWFORD: Okay.

THE WITNESS: Yes, ma'am.

BY MR. CRAWFORD:

Q So, does that mean that someone could configure their --

THE COURT: Well, what does that mean? You have to ask him --

MR. CRAWFORD: Well, okay. I'd like to give him an example in my question, Your Honor, if I may. And I will ask him, as you suggest, what does that mean.

A That means that the char --

THE COURT: Wait a minute. He hasn't asked the question yet.

MR. CRAWFORD: I haven't asked the question yet.

THE WITNESS: Oh.

BY MR. CRAWFORD:

Q Can you have -- can you have a configuration beyond what they -- Electrolux suggested in their manual and still meet their requirements to operate that dryer?

MR. KOTT: Objection as to form.

THE COURT: Sustain the objection. Make the question a simpler question.

MR. CRAWFORD: Sure.

BY MR. CRAWFORD:

Q Are there configurations that you tested that violate what they suggest and still met the requirements of the manufacturer?

MR. KOTT: Same objection.

THE COURT: Sustained.

MR. CRAWFORD: Okay.

THE COURT: Take a minute, Mr. Crawford, and break it down for us.

MR. CRAWFORD: Sure.

BY MR. CRAWFORD:

Q Did you do --

MR. CRAWFORD: Make it simpler.

Q Did you do tests that had multiple 90 degree turns on it?

A Yes.

Q Okay. And is that -- are those tests beyond what's recommended by the manufacturer?

A Yes.

Q Okay. And --

THE COURT: What do you mean "beyond?"

MR. CRAWFORD: Okay, sure.

BY MR. CRAWFORD:

Q What does the manufacturer suggest?

A I have a slide of that. Here's one of our test configurations that you were just asking about.

Q What -- what is the length of that?

A 72 feet and nine turns. But here's their chart, sir. That's really where I want to get to. Here it is. Electrolux allows maximum of four 90 degree turns with 28 feet of ducting. And this is rigid ducting now, so this is in the house ducting, with a four-inch hood. If you go to a two and a half inch hood --

Q Mr. --
A -- they allow a maximum of 16 feet.
Q Let me stop you. Is this coming from the owner's manual or the installation manual?
A This is coming from the installation manual.
Q Is this information in the owner's manual?
A No, sir. The owner's manual, is silent on ducting, there's no charts, there's no verbiage about what to use or not to use.
Q So, in Ms. Ellis's case, if I represented to you -- you were not here -- that she had someone else install it for her and, therefore, she didn't read the installation instructions, would she be able to figure this out by just looking at the owner's manual?
A No, there is no instruction on venting in the owner's manual.
Q How about this information. Is any of this information put on the dryer itself?
A No, sir.
Q Okay. All right. So, anyhow, this is what -- the chart they tell you to use, right?
A Right. This is their maximum length. I've tested --
THE COURT: Wait.
MR. CRAWFORD: Okay.
THE COURT: Next question.

BY MR. CRAWFORD:

Q Have you tested beyond those limits?

A Yes.

Q Okay. And what have you found?

A I went out -- I could stay underneath the .75 inches, the system back pressure must not be higher than .75 inches of water column.

Q Is this also from the installation manual?

A Yes.

Q Okay.

A I can go to eight turns, I can go to -- it's eight 72 or 76 feet with a four-inch hood, and I can stay below .75 inches of water column. So, this is a very conservative chart.

Q In the Ellis matter, what was the venting configuration like?

A The venting configuration consisted of eight feet of rigid pipe with one T which is utilized as a 90 degree turn, and one 45 to go out a roof-mounted roof vent, and I believe I have that. Okay. Please ask me the question, sir.

Q Sure. What was the venting configuration in the Ellis matter?

A Thank you. We had a -- this is all rigid duct here, 100 percent.

Q And where is that in the house?

A This is up in the attic.

Q Okay, thank you.
A This is above the second floor. Then coming down into the second floor, we have a T. This T then hooks to flexible foil duct.
And for the purposes of my analysis, I made the assumption that the duct was hooked to the side. And why I did that, it only makes sense to me that this --
THE COURT: Just a second. Ask your next question.
MR. CRAWFORD: Okay.
BY MR. CRAWFORD:
Q Why did you think it was configured like that?
A There was a clean out here. You wouldn’t put a clean out on the side because how could you go up around that first 90 degree bend? So, it would make sense to have a clean out on the bottom so you could clean any lint out of this pipe. So, therefore, the configuration that I feel was at the home was off this 90 degree.
Q Now the flexible duct that was used in this matter, do you know what the condition was like at the time of the fire?
A Yes.
Q What was the condition like?
A It did not have any kinks. It had radius bends. In fact, I have a photograph. There are witness marks on the wall of the residence. And what you’re seeing is the flexible foil duct where it was against the wall, and the -- there’s no kinks

or sharp bends. And I tried to highlight it in red so -- no, the discharge of the dryer would be right here.

Q Okay. Is there a problem with a consumer using flex duct like that?

MR. KOTT: Objection. Are we talking about this Electrolux dryer or something else?

MR. CRAWFORD: Yeah, this Electrolux -- this type of Electrolux dryer.

BY MR. CRAWFORD:

Q Is there a problem using a flex foil?

A Yes and no.

Q Okay. What do you mean by that, yes and no?

A Flexible foil duct can kink and can be crushed easier than rigid or semirigid ductwork. So, if -- to answer your question, if it's installed correctly, based on the standard, there is a standard for flexible duct, UL 2158(a). If it's installed correctly, it is not a performance or a fire hazard. If it's installed incorrectly, now I need to know what type of dryer that it's installed on.

So, in a vacuum, if someone says to me, "Mr. Parsons, I have 1,000 dryers with flexible foil duct, what's your opinion?" I'm going to tell you it's an immediate fire hazard. Immediate. And you say, "How can you say that?" If I don't know if it's kinked or crushed, if I don't know the type of dryer it's on, I'm going to err on the side of being conservative, and it's a fire hazard.

Now I learned that it's installed correctly.

Q Okay.

A So now --

Q What do you mean by "correctly?"

A Following the standard of 2158(a) and the manufacturers of the flexible foil duct. They tell you how to install it. They tell you pull it tight, you know, trim it, as necessary, keep the duct as short as possible.

So, if it's installed correctly, then there is no issue with using that -- using that ductwork. It doesn't make any dryer more dangerous, and it doesn't make any dryer more safe as long as it's installed correctly.

If it's installed -- if it's installed incorrectly, now there's two challenges here. I need to understand the appliance that it's hooked to.

Through our lint analysis, I know that in a bulkhead dryer, lint doesn't collect near the heat source.

I know that in a ball hitch dryer, it does collect near the heat source.

If a flexible foil duct is kinked, in the Ellis situation, that is a fire hazard. If it's kinked in a bulkhead situation, it's a performance hazard.

And what's the difference? Performance means it takes longer to dry and it uses more fuel. In a bulkhead, that's what happens when you restrict the airflow.

THE COURT: What do you mean by "kinked?"

THE WITNESS: If you change --

THE COURT: Speak to the jury.

THE WITNESS: If you --

THE COURT: Into the microphone.

THE WITNESS: If you change the diameter and you either kink it or crush it, you change the round cross sectional diameter and you reduce it. As you --

THE COURT: When you say "kinked," show me -- if you say this is the round --

THE WITNESS: Correct. To kind it -- if this was the duct, and it was to take a sharp bend, it kinks. When it kinks, it reduces the cross sectional diameter, reduces airflow.

Very similar to if we crush it, it does the same exact thing. It reduces the cross section diameter. When that happens, it reduces the airflow through the dryer.

THE COURT: Show again to the jury what you mean by kinked.

THE WITNESS: Kinked is to -- is bending it and then causing it to kink.

THE COURT: Well, you're causing the two cups to actually break. Show us again what you mean by kink. Does it actually break apart?

THE WITNESS: No, I just don't --

THE COURT: All right. Just show us.

THE WITNESS: I don't know how to do this without it not breaking, without --

THE COURT: Well, yes, do -- okay.

THE WITNESS: There we go. That would be a kink. Now if we looked at the cross sectional diameter, you'll see it's greatly reduced. That reduces airflow.

So, whether it's kinked or crushed, the end result is exactly the same, reduced airflow.

On a bulkhead dryer, that extends your drying times. You, as a customer, are going to use a lot more energy an it could take you two to three hours to dry your clothes.

On a dryer like the Ellis's it's a fire hazard. The reduced airflow allows lint to collect behind the drum near the heat source.

BY MR. CRAWFORD:

Q Well, are certain -- are there times that the application is appropriate to use a foil duct?

A Yes.

Q Okay. Can you give me an example?

A Yes. When you put a laundry center or stackable washers and dryers in a closet, just like the Ellis's, it's very difficult, if not impossible, to use rigid duct because the clearances on the sides, you as a person, if you get behind there to hook the duct up, how do you get out? You have a eight-foot ceiling, you have a six-foot tall appliance with a six-foot eight inch or six-foot six-inch door opening. There's no way to hook it up and get out. With semirigid, you have the same problem.

So, there are manufacturers, Exhibit 21 --

Q Well --

MR. KOTT: Your --

A -- that allow the use of flexible foil ductwork.

Q Well, let --

MR. KOTT: Well, Your Honor --

MR. CRAWFORD: Oh, I'm sorry.

MR. KOTT: Excuse me. What other manufacturers might allow is not relevant. It's what this manufacturer allows, it does not --

MR. CRAWFORD: Agreed.

THE COURT: Yes.

MR. KOTT: And, Your Honor --

THE COURT: I'll sustain that objection.

MR. KOTT: -- part of the problem -- I'd ask that the Court instruct the witness that he simply respond to the question and not -- that's part of the problem here.

THE COURT: And that is important just in terms of courtroom protocol. Because the lawyer on the other side can't know whether to interpose an objection or not unless he hears the question. So, we can't have a witness just lecturing or just talking without it being in response to a specific question.

So, I'm going to ask Mr. Crawford, make sure you ask the question, the witness answers it. And then if you want him to elaborate, that's fine. But just ask another question.

MR. CRAWFORD: Sure.

BY MR. CRAWFORD:

Q The manufacturer in this case is Electrolux, you understand that.

A Yes, sir.

Q Okay. What other brands do they make this style dryer?

A They make it for Kelvinator, for White Westinghouse, they make it for Frigidaire, they make it for Kenmore, they make it for GE, they make it for numerous other manufacturers.

Q And does this manufacturer -- and when I say "this," Electrolux, do they -- do they sell flex foil?

A Yes, sir, they do.

MR. KOTT: Your Honor, I object. That's three time that the Court's --

THE COURT: That's really --

MR. KOTT: -- granted --

THE COURT: That's not really the point, though, because -- and I think we've gone over that before. What would be relevant in this case is what the installation instructions say. Whatever other products this company may sell is not really the point.

MR. CRAWFORD: Can I be heard at sidebar on that, Your Honor?

THE COURT: I think we've gone over that. I'll hear you at the end of the day, but I'm not going to break for this now.

MR. CRAWFORD: Very well. Your Honor, I would like to just change this to the overhead for a second and show the photograph.

BY MR. CRAWFORD:

Q Mr. Parsons, I'm going to show what -- on the screen here -- I don't know if you can see it.

THE COURT: And he has to identify what that is.

MR. CRAWFORD: Yes. May I approach, Your Honor?

THE COURT: He can identify it from there if he can.

MR. CRAWFORD: You know what I'd like to do is as clear up close, to see it up close.

THE COURT: Sure.

MR. CRAWFORD: Okay. I'm showing the witness PL-17, Item 10.

BY MR. CRAWFORD:

Q Can you tell us what that is?

A That is a dryer with a flexible foil duct on top of it, and rigid ducting in the background.

Q Do you know which dryer that it belongs to?
A Yes.
Q Which one?
A The Ellis dryer.
Q Okay. Could you describe the condition of the flex foil in that photograph?
A It's not kinked and it's not crushed in this photograph.
Q And do you have an expectation how that -- the condition of that duct would affect the machine -- the Ellis machine?
A I'm not sure I understand that question, sir.
Q Sure. Given the condition of that flex duct, what kind of impact, if any, would it have on the operation of the Ellis machine?
A It would have no impact on the Ellis machine, meaning it would function appropriately.

MR. CRAWFORD: Your Honor, may I publish this to the jury?

THE COURT: Sure. Any objection?

MR. KOTT: Just -- just what exhibit number? I don't have an objection.

THE COURT: I'd like to know, though, before you publish it, when was that photograph taken? When did you make that observation so as to identify this for us?

MR. CRAWFORD: Judge, this is Plaintiff Exhibit 17 --

THE COURT: And let the witness tell us how he can identify this for us.

THE WITNESS: That is a photograph taken by the fire department on the day of the fire.

THE COURT: Were you -- I see. So, you never saw this.

THE WITNESS: I've seen the photo. I was never at the loss site, ma'am.

THE COURT: You never saw this configuration like that of the Ellis dryer with the venting like that.

THE WITNESS: Installed after the fire, I did not, ma'am.

MR. CRAWFORD: Your Honor, we would move on behalf of the plaintiff to have Exhibit 17-10 into evidence.

MR. KOTT: I have no objection.

THE COURT: Very well. It may come in.

MR. CRAWFORD: May I publish it, Your Honor?

THE COURT: Surely. So, the witness was told that that's what that photograph was taken of -- what that photograph depicted. Do I understand?

MR. CRAWFORD: The witness was shown the fire department photographs, Your Honor.

THE COURT: Well, what about my question? The witness was -- is testifying as to what someone told him, whether it's fire department or whoever, what it depicted. Is that correct?

MR. CRAWFORD: I don't know the -- I can tell you at sidebar, Judge.

THE COURT: All right.

(Pause)

BY MR. CRAWFORD:

Q And that -- you may have answered this and I may have asked it, I apologize, what would you approximate the length of that flex foil duct to be?

A The flex foil duct is approximately six feet.

Q And how long was the rigid duct that went out from the ceiling up to the -- out the roof?

A Eight feet in length.

Q And is there anything wrong from the manufacturer's standpoint of having a vertical duct as opposed to a horizontal duct?

A No, sir. Vertical ducts are allowed by the installation manual.

Q And when you say "the installation manual," whose?

A The Ellis's installation manual.

Q Okay. Now did you do a safety engineering analysis for the Ellis matter?

A Yes, I did.

Q Okay. Could you take us through that? You talked about it during your direct earlier when you were going to be qualified. Apply that standard -- that three-step standard in the Ellis matter, if you could.

A Safety -- the safety hierarchy is once you recognize the hazard and the hazard definition is lint collects behind the drum near a heat source, the first thing that a design person would do is design the hazard out of the system. You can do it in this instance, it would require retooling their entire operation, meaning cease production of the ball hitch platform and start producing the bulkhead platform.

If you choose not to do that, the next step in the hierarchy would be install an engineering guard or a safety. We designed a guard for their ball hitch gas dryer and that guard eliminated the lint from coming in contact with the heat source.

Q Mr. Parsons, do you have any photographs that depict the guard or the -- what you came up with, your design?

A Yes.

Q Oh, I'm sorry. Got to get it back to the projector, I'm sorry.

(Pause)

Q Okay. Could you show us what the -- how that guard works and how you came up with it?

A Correct. The parameter was was to install a guard to simply isolate the lint from the heat source, period. If I can keep the heat away from the lint, it will not catch on fire. So, that was my goal.

MR. KOTT: Your Honor, this side has hearsay. Can it be removed from the jury's --

BY MR. CRAWFORD:

Q Could you remove that, Mr. Parsons? That's -- oh, thank you. Okay.

THE COURT: Because that person is not going to be a witness here, I assume.

MR. CRAWFORD: Yes, Your Honor.

THE COURT: That person -- all right. So, that would be hearsay. That would be eliminated and not to be considered by the jury.

MR. CRAWFORD: Okay.

BY MR. CRAWFORD:

Q What do we have up there?

A We -- this is a gas dryer, identical to -- or substantially similar to the Ellis. We've got our gas burner, our gas burner. This is the same dryer, just two different angles.

All we did was fabricated a sheet metal duct, extended the duct up, and then discharged it at the 1 o'clock location. What this does is it keeps -- first of all, it keeps the velocity high. Because now it looks like a bulkhead duct.

Then the high pressure to low pressure conversion still happens behind the drum. If there's lint in suspension, and if it drops out, or lint gets in from any other manner, it certainly is going to collect at the 6 o'clock position, I can't change that.

But what I've done is at the 6 o'clock location, there is no way for the lint to fall in, come in contact, or be anywhere near the burner flame, which is down below it. This panel here is a double panel. So, it gives you a thermal break, an insulation break. The inside panel will be one temperature, the outside panel is substantially less. We've tested this and it collects lint at the 6 o'clock location.

Q Could these materials and technology have been around 2002, before the Ellis matter was manufactured -- the Ellis dryer?

A Yes, this was just steel that I put in our press, bent -- I cut, bent, made the jig up, made a template, I just simply made this up, bolted it on, and then proceeded to test it for fire safety and for performance.

Q And how did that perform in that configuration?

A It perfected exactly the same as a Electrolux dryer with no guard. The timing issues were the same, meaning it dried the same ten towels in the same exact time. There was no performance difference. There was no energy difference. The only difference is that when lint collects at the 6 o'clock position, which it does, even in this design, it can't come in contact with the heat source.

Q Okay. You were going -- this is the second step of the

safety engineering hierarchy, correct?
A That is correct.
Q Okay. Take us through the third step.
A The third step is install a monitor. It is possible to monitor this dryer with a cycle timer or a counter, meaning after it's operated for a certain amount of time, a light simply would come on that says "service your dryer." If you continue to operate it, that's fine. Another light come on that says, "Service dryer now" and it would open a relay and shut the dryer off. So, you would have to have a service person come out to clean the dryer and then reset the timer. And I believe -- here it is -- this would be "clean your exhaust system."
Q Is there anything like that on the Ellis dryer, the Electrolux dryer?
A No, the -- no, there is no design like this on the Ellis dryer. And the two lights would be "service dryer soon," okay, or "service dryer now." Yellow, it operates. Red, it stops operating until it's serviced. That's if you choose not to fix the root cause of the problem, meaning lint collecting at the heat source. Of you choose a least -- a less preferable method through a safety or through a warning, remember in the hierarchy, that is the least preferable method. The best method is to redesign the product. The second best method is to guard.

Q Okay. And then what's the next step if you don't guard? Is there any more guards other than those two that --
A No.
Q Okay.
A Then you go --
Q Now you go into what? Warning?
A Into written warnings, that's correct.
Q And how -- what -- what should a manufacturer do with regard to written warnings?

MR. KOTT: I object; he wasn't offered as an expert in warnings, and he's not qualified as an expert in warnings.

THE COURT: I think he actually said that.

MR. CRAWFORD: Your Honor --

THE COURT: When he's -- when he took the stand and started his testimony.

MR. CRAWFORD: Judge, we have no -- we are not going to present this man as a human factors warnings expert. The issue we're bringing up is the safety of the location of warnings. Not the content of the warning, not the design of the warning.

THE COURT: All right. Overruled.

BY MR. CRAWFORD:

Q On the safety element of warnings, okay, what is expected under the safety hierarchy?
A It's --

THE COURT: Not what is expected. What is -- you said where located.

MR. CRAWFORD: Okay.

BY MR. CRAWFORD:

Q Let me back up. What warnings were provided by Electrolux for the Ellis matter?

A I can --

Q Pardon me?

A I can show you those, I have those.

Q Okay.

(Pause)

A This was the actual warning on the Ellis dryer. Well, it's a copy of the actual warning that was on the Ellis dryer.

Q On the dryer or in the literature?

A This is on the dryer. It's physically -- if you were to open the door, it's on the inside door frame. To fit it on one screen, I actually split it. And what that means is this part of the warning actually is here. So, it's a long narrow warning that fits on the inside of the door frame.

Q Okay. Now in your investigation, did Ms. Ellis comport with the cleaning of the lint screen?

A It's my understanding that she used the dryer every other week and cleaned the lint screen when she used the dryer every other week, three or four times. It's my understanding she did not clean it every single time she used the appliance. It's my understanding that she would look at it. If it was okay, she'd reuse it, and then maybe clean it one time.

THE COURT: Well, we heard her testify, and that would be the testimony that she gave here. So, there's no point in his recapitulating what he understands she said; we heard her.

MR. CRAWFORD: I just want -- yes, I appreciate that, Your Honor. I just wanted to lay the basis for his opinion.

THE COURT: Yes, I -- but basis or nothing, he's testifying what he was told she said. But she testified here.

MR. CRAWFORD: Okay. All right.

BY MR. CRAWFORD:

Q Now you're -- this is what the warnings were.

A Yes.

Q Okay. What hazards, if any, do you believe should have been given on the dryer?

MR. KOTT: I have the same objection.

THE COURT: Well, see, you already told me that that's not what he's going to be testifying to. And he actually said that at the beginning of his testimony, that he would not be testifying with regard to the --

MR. CRAWFORD: I'll rephrase that question, Judge, because I think you're right and I -- I want to make sure we have -- we're on the same page here.

THE COURT: We're all on the same page, Mr. Crawford.

BY MR. CRAWFORD:
Q What hazard -- what hazards were there with this dryer?
A The lint collects behind the drum near a heat source.
Q Okay. And from a safety engineering standpoint, or the safety hierarchy we've been talking about, what should be done about that condition?
A First, you design the hazard out of the system. Second, you install an engineering guard or safety. Third, you warn on the appliance. And, fourth, a written instruction.
Q Okay. Were there any warnings on the appliance on that? Not what they should be, but were there any on the appliance for that hazard?
A No, sir.
Q Were there any written warnings that accompanied that dryer for the hazard you just described?
A No, sir.
Q Now we -- we heard -- or you reported about how much Ms. Ellis used her dryer. Could you put that in perspective? Let me back up. What's the yearly anticipated use by the Department of Energy?
A 416 cycles per year is the average expected usage of a dryer.
Q Okay. And what amount of usage did Ms. Ellis have yearly?
A 102 times a year.
Q How do you get that?

A She used the dryer every other week between one and five times. I chose four as an average, multiplied it by 26, came out with 102. I hope I did my math right.
Q Okay. And 102 -- the dryer was installed 2003, the fire took place in 2005. What's your aggregate number of cycles or usage for her during that time frame?
A I bounded the problem by date of manufacturer. June of 2003, when that appliance was made, the fire occurred December of 2008. So, I know that if I use the date of manufacturer and the date of loss, and I take that whole window, that I can't be -- I can only be overestimating. That is five years and six months.
Q And how many cycles is that?
A 572 cycles in her life expectancy or her usage of that dryer from the day it was manufactured to -- or the month it was manufactured to the month of the fire.
Q Does Electrolux give any instructions or directions on how often you should clean the dryer?
A They do.
Q And what is it?
A Every 18 months.
Q Based on the Department of Energy's number, how many cycles would there be in that 18-month period?
A 624 cycles in 18 months before the dryer would requires cleaning.

Q So, based on the governmental average, Ms. Ellis's five-year use is less than 18 months -- 18 months worth of use, is that correct?

THE COURT: Why don't you -- you should let the witness answer that.

MR. CRAWFORD: Okay. That's correct.

BY MR. CRAWFORD:

Q Did you do an analysis of her usage versus the national average?

A I did, sir.

Q And what was it?

A That she used her dryer 572 times in five years six months. She used it either 102 or 104 times in one year, and that the average is 416 times.

Q Okay. There's been some -- there was -- were you aware that PSE&G came out and -- I can't say cleaned -- did something to her dryer?

A Yes.

Q Okay. Did that factor into your analysis?

A Yes.

Q How so?

A She was having a complaint of the dryer taking extended drying times. Generally that means there is reduced airflow through the appliance.

There are several things that can cause that. If you don't close the door all the way, if you have a bad door gasket, there's multiple things, including a restricted vent or a clogged vent.

It's my understanding that three to six months prior to the loss, that a service was done by PSE&G and no parts were replaced, she felt that they had cleaned the ductwork. After that, there was no reported longer drying times. The dryer appeared to dry normally.

MR. KOTT: Your Honor, I move to strike that she felt that they cleaned it. That's actually contrary to what she said.

THE COURT: Let me just ask you how did you determine what PSE&G did when they came out and serviced Ms. Ellis's dryer?

THE WITNESS: Through an interview with her.

THE COURT: Through an interview with her?

THE WITNESS: Yes.

BY MR. CRAWFORD:

Q Do you have notes of that interview?

A Yes.

Q Could you get to the question and answer on that issue?

THE COURT: Did she say she watched whatever they did? Just read your notes without answering that.

THE WITNESS: Prior to the fire --

THE COURT: No, just read it to yourself.

THE WITNESS: Oh.

(Pause)

THE WITNESS: Yes, ma'am.

THE COURT: All right. Did she say she watched whatever they did? Yes or no?

THE WITNESS: No.

BY MR. CRAWFORD:

Q What was asked of her?

A I didn't ask that question. I asked her what she recalled that PSE&G did to service the dryer.

THE COURT: Did you ask her how she would know what they did?

THE WITNESS: No, I asked her what she thought they did.

THE COURT: Oh. All right. Thank you very much.

BY MR. CRAWFORD:

Q What does cleaning the dryer -- the bulkhead dryer mean? If someone was to come over and clean the dryer, do you have an expectation as to what that encompasses?

THE COURT: Mr. Crawford, what expectation --

MR. CRAWFORD: Okay.

THE COURT: That's meaningless at this point.

BY MR. CRAWFORD:

Q What does -- what do authorized representatives do to treat a bulkhead dryer?

A You said bulkhead.
Q I'm sorry. Ball hitch.
A I don't know what they do because there is no instruction --
MR. KOTT: Your Honor, I think that answers the question.
BY MR. CRAWFORD:
Q Why don't you know?
THE COURT: Just a second.
MR. CRAWFORD: Oh, I'm sorry, Your Honor.
THE COURT: Take your time. Is there anything further that you wish to ask which would be consistent with the rules?
BY MR. CRAWFORD:
Q Do you know if anybody cleaned that shelf behind the drum from the time she bought it up until the time of the fire?
A I have no idea, sir.
Q If someone --
THE COURT: Mr. --
MR. CRAWFORD: Okay.
THE COURT: Mr. Crawford, sometimes you want to do something, but -- you know?
MR. CRAWFORD: Okay.
BY MR. CRAWFORD:
Q Would a lint build up on that horizontal shelf affect the

operation of the dryer?

A Generally, no.

Q The high temperature cutoff switch you were referring to earlier --

A Yes, sir.

Q -- would that -- is that related in any way to the slow drying times?

A Yes, sir.

Q How so?

A If you reduce the airflow in the dryer -- and, again, let's say you put a large comforter in the dryer and stuffed it in there, that dryer will cycle off the high limit.

If you reduce the exhaust sufficiently, it will cycle off the high limit.

If there's an air leak in the dryer, the door gasket or other seals, you could reduce the airflow through the dryer. All will cause cycling of the high limit.

THE COURT: All will cause what?

THE WITNESS: Cycling --

THE COURT: Yes.

THE WITNESS: A high limit to open and close.

BY MR. CRAWFORD:

Q Does using plastics a problem in the dryer?

A Yes.

Q Why?

A The plastics that are used in the Ellis dryer, when subjected to continuous fuel and heat such as the lint that builds up, they will continue to burn, they pull, they melt and burn out of the appliance, and they assist in fire spread.

MR. CRAWFORD: Your Honor, can I see you -- I just wanted to follow-up on the questions that the jurors may have had and I haven't -- with this witness. I know that we talked about that earlier, and we were saving questions.

THE COURT: Let's take a mid afternoon break. Ladies and gentlemen, step down. We'll do it while they're taking the break.

(Jury Out)

THE COURT: The witness may step down, take your break. We won't take a break.

THE WITNESS: Thank you, ma'am.

(At 4:11 P.M., witness excused/Witness resumes stand at 4:32 P.M.)

THE COURT: Bring in the jury. Have seats, ladies and gentlemen, please. I'm going to adjourn at 5 o'clock today, so --

(Laughter)

RONALD PARSONS, PLAINTIFF'S WITNESS, RESUMES STAND

THE COURT: All right. Mr. Witness, Mr. Parsons --

THE WITNESS: Yes, ma'am?

THE COURT: Does the owner's manual for this particular Ellis dryer direct the owner to remove the covers for the 18-month service?

THE WITNESS: No.

THE COURT: All right. All right. Anything further Mr. Crawford?

MR. CRAWFORD: Judge, on the -- I thought we had two questions we were going to ask.

THE COURT: No. Here, you can see the first one, but I think that's -- I think the rest has been covered quite fully.

MR. CRAWFORD: Very well. No further questions by the plaintiff, Your Honor.

THE COURT: Thank you. Cross-examination.

(Pause)

THE COURT: Is there an installation manual produced when this Ellis dryer is sold?

THE WITNESS: Yes.

THE COURT: And is an owner's manual produced when this Ellis dryer is sold?

THE WITNESS: Yes. The dryer comes with both of those, ma'am.

THE COURT: All right. Thank you.

CROSS-EXAMINATION

BY MR. KOTT:

Q Mr. Parsons, I'm going to ask you to put -- oh, no, I'm not going to ask you because it's not up there. We switched things. That’s okay, I’ll go to a different subject. I want to talk about lint.

A Yes, sir.

Q The laundering process, as a whole, is responsible for lint generation, is that correct?

A Yes, sir.

THE COURT: You’ve got to keep your voice up.

MR. KOTT: Thank you, Your Honor.

THE COURT: The later in the day, the more you have to keep your voice up.

BY MR. KOTT:

Q And what that means is that lint is a byproduct of the laundering process, right?

A As well as the wearing of clothes, sir. It’s that whole wearing, washing, and drying. It’s that whole process that produces lint.

Q And there’s no mechanism that you’re aware of to stop the shedding of lint from clothes in our standard residential appliances, is that true?

A I don’t know any mechanism, commercial or residential, that you could stop lint production.

Q Okay. When things are washed and dried and worn, and a product is stretched and pulled --

A Exactly.

Q -- and that breaks down the fibers --

A Correct, you actually break those fibers and the bonds of those fibers.

Q And then once you do the laundering process, it frees those fibers up, correct?

A The agitation process then breaks them down even farther through the agitation process, and those little bits and pieces, they're very small, are typically, or a lot of times, trapped in the fibers. Some floats free, but a lot of it's trapped in the fibers, yes.

Q Typically in dryers, whatever the brand or whatever the type, lint will develop, is that correct?

A The lint is released through the drying process, yes.

Q And that's true, whatever the brand.

A That is true no matter what brand you have, that is correct.

Q The development of lint is an ongoing process over the life of the fabrics, correct?

A Yes.

Q And movement of the woven materials results in the breakdown of the fibers, correct?

A Yes.

Q That releases a small portion of the fiber through the regular wearing or the use of the articles, correct?

A Yes.

Q It also removes small portions of lint -- I'm sorry -- it

also removes small portions of fiber through the laundering process, correct?
A That's correct.
Q Is a top loading washing machine more aggressive on clothes than a front loading washing machine?
A Yes.
Q In addition to the breakdown that we've talked about, during the laundering process, the articles hit against each other, and that creates lint, correct?
A Correct.
Q So, we can agree there are numerous things that can cause lint, is that correct?
A Yes, we can agree that there are -- from wearing to drying, it's that whole cycle that produces the lint. It's just your dryer catches it.
Q Okay. So, let me switch gears. Some fabrics put in a dryer throw off more lint than others, is that true?
A Yes. Like I said with the towels --
Q Just -- okay. Just stay with me. I'm going to take you through that.
A Okay.
Q Cotton will have more -- generally more lint than non-cotton?
A Yes, because of the loose weave, sir.
Q Right. And then cotton will produce more lint than

polyester because polyester is a tighten of weave, correct?
A Exactly, and it's a synthetic. It's a tougher fiber to begin with.
Q So, the more open the weave, the more lint that is created, as a general proposition, is that correct?
A Yes.
Q Okay. 100 percent cotton jeans, blue jeans that people wear, they're going to --
A Correct.
Q They're going to throw off less lint than the towels you tested, is that correct?
A I agree 100 percent with that.
Q And that's not just the weave, that also relates to the thread count, is that correct?
A That is correct.
Q And by threat count, we're talking in a general lay sense about the density of the fabric, correct?
A Threads per inch is the thread count. Like in sheets, that would be a good example.
Q Now towels generally will throw off a fair amount of lint, correct?
A Yes, sir, they do.
Q And I want to talk about the first time you dry a towel, you're going to get more lint than ninth time, is that correct?
A I agree 100 percent.

Q It's kind of an inverse bell curve, would you agree with that?
A It is. There comes a point where she's stabilizes, and then as the material really begins to fail, rip and shred, it then begins to produce a lot more lint again.
Q So, when I said inverse bell curve, at the beginning there's a lot, then it's less, less, less, and then as the garment is getting worn out, it goes back up again.
A I agree with that statement, sir, yes.
Q The size of the load affects the lint, is that correct?
A Yes.
Q But generally bigger the load, the more the lint?
A Now that's an interesting question. Generally, yes. But if you have an extremely small load and the clothes are tossed around more than normal, then that also can cause --
Q Okay.
A -- an excessive amount of lint generation.
Q But if I throw a comforter in there, big load, I'm going to generally generate more lint than if I just do three towels, is that true?
A I would disagree with the comforter because you pack that comforter in tight.
Q Okay.
A So, you don't get the impact, you don't get the tearing, you don't get the tumbling because it's packed in the dryer

tight.
Q How about -- the capacity of the Ellis dryer was how many pounds, 14?
A 14 pounds, 5.7 cubic feet, sir.
Q Okay. If I'm doing towels and I do ten pounds of towels versus three pounds of towels, I'm going to get more lint with the ten pounds of towels than three pounds, would you agree with that?
A Overall, you will produce more lint because you have more garments or more towels that physically can break down to produce the lint.
Q Right. And they can hit into each other the more there are, is that correct?
A Yes.
Q How about the heat setting, does that have an impact on the lint generation?
A Yes, it does.
Q Explain that to the jury.
A The higher the heat setting, generally the more lint you produce as you dry the fabrics, it's in the final drying process when you release all of the lint. So, if you use cool, then when you take the towels out, they're slightly still moist, there's more lint contained within the towels than what's by -- than what's shed by the towel if you did that same exact load on high heat.

Q Okay. Now this lint that we've been talking about in the dryer, it becomes airborne, isn't that correct?
A Yes.
Q It collects inside the dryer cabinet on the lint screen and on the exhaust piping attached to the dryer, isn't that correct?
A I'm not sure -- inside or outside, sir, you're talking about now?
Q I'm referring -- I'll tell you where I got that from. Will you look at Page 43 of your report?
A Okay.
Q Do you have it there?
A Yes, sir.
Q Do you see where you have a sentence where it says, "It," it referring to lint, "collects inside of the dryer cabinet, on the lint screen, and in the exhaust piping attached to the dryer"?
A That is related to internal components, sir.
Q Okay.
A That's the internal components --
Q Right.
A -- not the external components.
Q Right. But that's -- those are areas where the lint collects, right?
A Yes.

Q Inside the dryer cabinet is one, right?
A Yes, sir.
Q The lint screen is another, right?
A Correct.
Q And the exhaust piping attached to the dryer, right?
A That’s a few, yes, sir.
Q Okay. Now during the drying process, the lint, as it’s being thrown around, is wet generally, is that correct?
A In the -- in the initial stages, it is wet and generally bound to the garment that it’s attached to. It’s as you begin to dry it, it begins to shed that lint.
Q Okay. And as it sheds, when it’s moist, it allows it to adhere or stick to various components, is that true?
A That is correct.
Q I want to switch gears and come to the installation in this case. There are a few different mechanisms that can cause an excess of buildup in -- of lint in a dryer, right?
A Yes.
Q And one of those mechanisms is improper installation, is that true?
A Please define installation for me.
Q Well, how the venting system is done and things of that nature.
A That’s a definition, yes.
Q Okay. All right. And any restrictions in the venting

system will affect the airflow within the dryer, is that true?
A Yes. If you restrict the going out, you restrict how it moves through the appliance, yes.
Q And restrictions that affect the airflow inside the dryer can be created in a few different ways.
A Yes.
Q And would you agree that the first and most obvious way is to reduce the diameter of the exhaust vent to reduce output airflow?
A No.
Q Would you turn to Page 43 of your report and see if that sentence is in there? And I'll read it to you again, quote, "The first and most obvious is to reduce the diameter of the exhaust vent to reduce output airflow?"
A I disagree with what I wrote here.
Q Okay.
A And let me explain quickly.
Q That's okay. So, you put it in your report, but you're telling me you disagree with it.
A A large comforter would be the easiest --
Q Stay with me.
A -- way.
Q I'm sorry. You put it in your report, but you're telling me you now disagree with it, is that what you're telling me?
A Yes.

Q Okay. Now restrictions and internal venting can reduce airflow, right?
A Please ask the question again, sir.
Q Restrictions and external venting can reduce airflow, right?
A Yes.
Q And if you add bends or increase the length of the vent, that would also out -- reduce output airflow downstream of the blower fan.
A Yes, because it creates --
Q Right.
A -- more restriction.
Q And when we say downstream of the blower fan, we're talking about the vents that come out of the dryer, right?
A Yes, that's what we're talking about, yes.
Q A change in the airflow can affect the efficiency of the lint being ejected, is that correct?
A Yes, sir.
Q And if you have a restriction in the transition duct, that is a factor that can increase the amount of the lint that the dryer is creating, is that correct?
A If it extends the drying time, you can then shed more lint because there's more physical damage to the clothes as they tumble.
Q Okay.

A Yes.
Q And when I referred to the transition duct -- let me -- what I said to you is if you have a restriction in the transition duct, it can extend the drying time, and then you'll get more lint, correct? That's what you're saying.
A Right. That's one mechanism.
Q Okay. When we -- let's first define transition duct.
A From the rear of the dryer to the permanent house ducting --
Q So --
A -- is what I consider the transition duct.
Q So, in Ms. Ellis's installation, we're talking about this flex foil, correct? That's transition duct.
A Yes, she had flexible foil for the transition duct.
Q Okay. And the reason that can impact on the lint is because if you have less velocity, the lint can drop out and collect behind the drum, but if you keep the velocity high, then it will push through, is that correct?
A It will push more through in that mechanism, but it still collects lint behind the drum even on a properly vented dryer.
Q Okay. Didn't you tell me in the deposition that I took of you that if you reduced the velocity behind the drum, the lint can drop out of suspension and collect behind the drum where if you keep the velocity high, it will stay in suspension and get pulled through the clothing and get trapped by the lint filter

or get ejected out through the dryer vent system, didn't you tell me that in the deposition?
A Yes, that is one mechanism to get lint behind the drum.
Q Right.
A There is a second, though.
Q Stay with me. Mr. Crawford can do any follow-up he wants. If you introduce foreign objects into the path of the airflow, that can reduce the airflow, as well.
A Yes, sir.
Q And isn't it true that restrictions is one of the major reasons for lint to accumulate within the dryer?
A Yes.
Q And when you have these restrictions that allow the extra lint, it collects within the cabinet because of the decreased airflow, isn't that correct?
A Yes.
Q Would you agree that an impediment to airflow, not only increases lint, but increases the chances of a fire in a dryer?
A If you increase the collection of lint, you increase the chance of a fire, yes.
Q So, therefore, you agree that an impediment to airflow increases the chance of a fire within a dryer --
A Yes.
Q -- is that correct?
A Yes.

Q In a bulkhead, the other type, the Whirlpool type --
A Yes, sir.
Q -- if the airflow is impeded, that also increases the likelihood of a fire in the dryer, isn't that correct?
A Not from behind the drum, sir.
Q I didn't ask you that. Stay with me.
A Okay.
Q In a bulkhead style dryer, if airflow is impeded, then that will increase the likelihood of a fire in the drum, isn't that true? I'm sorry. In a bulkhead dryer, if the airflow is impeded, that will increase the chances of a fire within the dryer, is that true?
A Yes, it is.
Q And that's true on the Maytag and the Whirlpool, those bulkhead dryers that you talked about before, isn't that true?
A In certain areas of the dryer, yes, it's definitely true.
Q And when you say "in certain areas," that's because in those dryers, you get more lint in the base and the base is where the hot spot is. By "hot spot," I mean the thing that's really hot, right?
A You mean the heat source, sir?
Q Yup.
A Yes, that is correct.
Q Just like in the Electrolux. In the base, you have the heat source or the hot spot, whatever you want to call it,

where it's really hot, correct?
A That is correct, sir.
Q And it has to be really hot because you really got to heat up this air because the clothes are soaking wet, correct?
A That is correct.
Q Now we haven't yet talked about the vent hood.
A About the vent?
Q Vent hood.
A Oh, correct.
Q A vent hood is generally the thing in the ceiling that goes out to the exterior.
A Are usually the thing in the wall that goes out to the exterior.
Q Okay. Well, let me take you back to the Ellis.
A Okay.
Q In Ellis, it went up through the attic and then through the ceiling, correct?
A Through the roof.
Q Through the roof, okay.
A Yes.
Q And you're assuming there is some -- in the Ellis case, there would have been some cover over there. You're not assuming that the vent just was open, are you?
A No way.
Q Okay.

A There was definitely a cover there.
Q Okay. The cover is generally a round cylinder, but it can be other configurations, correct?
A Yes, it could be square. There's numerous configurations for a roof style vent, yes.
Q In Ellis, in fact, it was square, wasn't it?
A I don't know that. I never saw that vent.
Q Did --
A I don't know.
Q Did you see Mr. McGinley's pictures of where the vent was?
A Yes.
Q Do you recollect from Mr. McGinley's pictures that what was shown was a square? Or do you not recollect that?
A I recollect, but that's not the vent, sir. That was a cutout in the roof deck that they had cut a square hole --
Q Okay.
A -- where that roof vent was.
Q Okay. So, that --
A So --
Q That was where the roof vent was, but that wasn't the shape of the roof vent?
A Well, I don't know -- if you have a sawsaw --
Q Yeah.
A -- to take round or square, sir, I would just cut a square and drop it right out.

Q Okay. So, somebody cut that roof vent out, that's what happened?
A That's my understanding.
Q Okay. And where do you get that understanding?
A I looked at the photographs of Mr. McGinley, and he has a photograph showing the underside of the roof, and you can clearly see where there's a square hole, and I believe I saw plywood or some covering from the outside over that hole.
MR. KOTT: I'm going to show the witness Mr. McGinley's photos.
BY MR. KOTT:
Q And maybe you can help me find it.
A Thank you, sir. I thought it was in the 90's, but I could be wrong.
Q All right. I'll let you --
A Thank you, sir.
Q It's one that shows blue.
A Oh, is it blue?
Q I thought it was blue.
A There was a covering, sir --
THE COURT: No conversation between you.
THE WITNESS: Sorry.
MR. KOTT: I'm sorry, Your Honor.
(Pause)
THE COURT: Now what is it you want Mr. Parsons to

find?

MR. KOTT: Yeah, Mr. McGinley -- Mr. Parsons told us Mr. McGinley had a photo of this cutout, and that's what I had asked him to find.

THE COURT: A cutout of what?

MR. KOTT: Of the cover or the area where the cover would have been that was cut out.

THE COURT: For the Ellis --

MR. KOTT: Yes.

THE COURT: -- dryer --

MR. KOTT: Yes.

THE COURT: -- vent.

MR. KOTT: Yes.

THE COURT: Can you find that, Mr. Parsons?

THE WITNESS: Yes, ma'am.

THE COURT: All right. What's your question?

BY MR. KOTT:

Q What number are you looking at, Mr. Parsons?
A Photo Number 68.
Q Thank you.
A That's it.
Q We're using the overhead, but in your photo, does it look blue in the one you have in front of you?
A I would guestimate that it's a blue tarp, sir.
Q Okay. All right. And that's where somebody cut out

whatever hood or screen was there, is that correct?

A Right that's that square opening right here.

MR. KOTT: Your Honor, I think I'm at a convenient stopping point.

THE COURT: I promised, yes. 5 o'clock. Thank you very much. You've been extremely patient. Drive carefully. Step down. We'll pick it up tomorrow, 9:30. Thank you very much.

(Whereupon, at 4:56 P.M., Mr. Parsons' testimony concludes)

CERTIFICATE OF TRANSCRIBER

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/s/ Karen Hartmann AAERT CET**D0475 Date: April 28, 2013

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